



For Action

Auditor General's Report - Review of Toronto Transit Commission's Revenue Operations: Phase One – Fare Evasion and Fare Inspection

Date: February 27, 2019

To: TTC Board

From: Audit & Risk Management Committee

Summary

The subject report, reviewed at the TTC Audit and Risk Management Committee on February 26, 2019, is forwarded to the TTC Board for review and consideration.

Contact

Beverly Romeo-Beehler, Auditor General
416-392-8461
Beverly.Romeo-Beehler@toronto.ca

Review of Toronto Transit Commission's Revenue Operations: Phase One – Fare Evasion and Fare Inspection

Date: February 21, 2019

To: Toronto Transit Commission Audit & Risk Management Committee

From: Auditor General

Wards: All

SUMMARY

The Auditor General's 2018 Audit Work Plan, received by City Council on December 5, 2017, included a review of the efficiency and effectiveness of Toronto Transit Commission's (TTC's) Revenue Operations.

We took a phased approach to the TTC Revenue Operations audit and have planned at least two audit phases, given there are multiple areas and risks within revenue operations. Phase 1 of the audit focused on fare evasion and the estimated loss of passenger revenue. The second phase will focus on the completeness of PRESTO revenue data received from Metrolinx and TTC's contract management.

Based on the data we collected and analyzed, TTC is estimated to have lost **\$61 million** in passenger revenue in 2018 due to fare evasion. Moreover, according to TTC staff, an additional **\$3.4 million** in revenue loss for 2018 was due to malfunctioning Metrolinx equipment. The total estimated annual revenue loss of **\$64 million** is probably understated, as we were not able to quantify the loss due to the malfunction of TTC's subway fare gate equipment and the use of crash gates¹ at subway stations. We plan to review these other factors further and estimate the loss in the next phase of our audit.

Based on our review, TTC's fare evasion rates are:

Streetcar	15.2 per cent
Bus	5.1 per cent
Subway	3.7 per cent
Overall	5.4 per cent (weighted average)

¹ "Crash gates" refer to TTC's practice of leaving the large accessibility fare gate open with a TTC staff member by the fare box to observe payment. This practice is done in high-volume subway stations to speed up passenger flow.

Our audit provides 27 recommendations. The implementation of these recommendations will contribute to decreasing TTC's fare evasion rates and increasing passenger revenue. It will also improve the effectiveness and efficiency of TTC's fare inspection program.

RECOMMENDATIONS

The Auditor General recommends that:

1. The Board request the Chief Executive Officer, Toronto Transit Commission, to set acceptable targets for its fare evasion rates (by mode and overall) and to develop short and long-term strategies to reduce the fare evasion rates and the resulting revenue loss, while ensuring good customer service.
2. The Board request the Chief Executive Officer, Toronto Transit Commission, to raise customer awareness and understanding of the importance of paying the appropriate fare, as well as the PRESTO card payment process, Proof-of-Payment system, and consequences if found evading fare.
3. The Board request the Chief Executive Officer, Toronto Transit Commission, to:
 - a. Accurately measure and publicly report on the fare evasion rate every year; and
 - b. Reports from Internal Audit on fare evasion study should be made public.
4. The Board request the Chief Executive Officer, Toronto Transit Commission, to further improve the fare inspection program by ensuring:
 - a. Adequate training to Fare Inspectors on data collection and why this work is important to Toronto Transit Commission;
 - b. Development of realistic and clear performance expectations; and
 - c. Implementation of ongoing monitoring of staff performance and regular review of inspection data.
5. The Board request the Chief Executive Officer, Toronto Transit Commission, to explore system wide options that can help prevent and reduce fare evasion on streetcars with multiple doors and Proof-of-Payment policy.
6. The Board request the Chief Executive Officer, Toronto Transit Commission, to expand its fare inspection program to include buses and develop effective fare inspection methods for buses.
7. The Board request the Chief Executive Officer, Toronto Transit Commission, to ensure that bus operators and streetcar operators are instructed and trained to press the fare dispute key whenever the appropriate fare is not paid. Data from the fare

dispute keys should be routinely analyzed and used to aid in the strategic allocation of fare enforcement resources.

8. The Board request the Chief Executive Officer, Toronto Transit Commission, to expand its fare inspection program to include coverage of subway station entrances.

9. The Board request the Chief Executive Officer, Toronto Transit Commission, to take the necessary actions to reduce the number of illegal entries, particularly at automatic subway entrances, including:

- a. Perform a cost-benefit analysis of continuing to keep the automatic entrances open, whether to install high gates in high-risk entrances at subway stations, and whether to station Toronto Transit Commission staff at some of these entrances;

- b. Complete work on the fare gate sensors and fare gate event data reporting, so that information can be used to determine the rate of illegal entries at subway stations and to strategically allocate fare inspection resources; and

- c. Ensure security camera video is monitored on a regular basis.

10. The Board request the Chief Executive Officer, Toronto Transit Commission, to ensure the contracted service requirements are upheld regarding functionality of Metrolinx Single Ride Vending Machines and PRESTO Card Readers, and recover from Metrolinx lost passenger revenue.

11. The Board request the Chief Executive Officer, Toronto Transit Commission, to review current TTC fare gate functionality issues, and develop and implement short and long-term strategies to improve fare gate functionality to reduce revenue loss.

12. The Board request the Chief Executive Officer, Toronto Transit Commission, to instruct and train crash gate staff on Toronto Transit Commission (TTC) policy, to request the fare collector to close the TTC fare gate when unattended by TTC staff, and to ensure fare collectors are trained in this task.

13. The Board request the Chief Executive Officer, Toronto Transit Commission, to re-assess whether there is a critical need to issue Child PRESTO cards, balancing provision of good customer service with the risk of fraudulent use of the Child Cards.

14. The Board request the Chief Executive Officer, Toronto Transit Commission, to *NOT* distribute the Toronto Transit Commission's promotional Child PRESTO cards until appropriate controls are in place.

15. The Board request the Chief Executive Officer, Toronto Transit Commission, to explore ways to provide a Child PRESTO Card that is visually different from an Adult PRESTO card, including further negotiation with Metrolinx to issue visually different PRESTO cards for adults and children aged 12 and under.

16. The Board request the Chief Executive Officer, Toronto Transit Commission, to make the necessary changes to the Child PRESTO cards so that bus and streetcar operators can spot inappropriate use of PRESTO concession cards including:

- a. Negotiate with Metrolinx to provide a different light and sound on PRESTO card readers for Child PRESTO cards from other concession types; and
- b. Perform cost benefit analysis and consider making change to Toronto Transit Commission revenue vehicles to include display of the PRESTO concession type for bus and streetcar operators.

17. The Board request the Chief Executive Officer, Toronto Transit Commission, to ensure adequate controls are in place and consistently applied in the issuance of Child PRESTO cards by Distributors.

18. The Board request the Chief Executive Officer, Toronto Transit Commission, to find ways with Metrolinx to either seize or obtain confirmation of deactivation for Child PRESTO cards found to be fraudulently used.

19. The Board request the Chief Executive Officer, Toronto Transit Commission, to work with Metrolinx to determine the feasibility of temporarily suspending the Child PRESTO cards on the Toronto Transit Commission until appropriate controls are in place.

20. The Board request the Chief Executive Officer, Toronto Transit Commission, to conduct a cost-benefit analysis of Transit Fare Inspectors vs. Transit Enforcement Officers with a view to improving the effectiveness and efficiency of the fare inspection program.

21. The Board request the Chief Executive Officer, Toronto Transit Commission, to review the level of authority, tools and uniform provided to Transit Fare Inspectors to ensure they can carry out their duties in a safe and effective manner.

22. The Board request the Chief Executive Officer, Toronto Transit Commission, to take steps to improve the speed, reliability, and functionality of PRESTO hand-held devices for fare inspections. Such steps should include, but not be limited to:

- a. Improving tracking and reporting of the functionality and repairs of the hand-held devices;
- b. Finalizing the Service Level Agreement with Metrolinx, which should specify a level of speed and functionality for the hand-held devices that meets Toronto Transit Commission's business requirements; and
- c. Holding Metrolinx accountable for its contracted service requirements on the speed, reliability and functionality of the hand-held devices supplied to the Toronto Transit Commission.

23. The Board request the Chief Executive Officer, Toronto Transit Commission, to improve the effectiveness of the off-boarding inspection process to minimize the number of passengers walking away from fare inspection, including measures such as installation of temporary or permanent physical barriers where feasible, and assigning a sufficient number of Transit Fare Inspectors and Transit Enforcement Officers for the off-boarding inspection.

24. The Board request the Chief Executive Officer, Toronto Transit Commission, to provide Transit Fare Inspectors with efficient access to the previous fare evader database during inspections.

25. The Board request the Chief Executive Officer, Toronto Transit Commission, to improve the effectiveness and consistency of the scheduling practices of its fare inspection program to:

- a. Ensure the route and timing coverage is risk-based and strategic; and
- b. Increase the use of plain clothed Transit Fare Inspectors as it enables a more accurate assessment of fare evasion rates and a more effective inspection program.

26. The Board request the Chief Executive Officer, Toronto Transit Commission, to explore ways to increase actual inspection time by Transit Fare Inspectors including:

- a. Automating the manual ticketing process and the recording and reporting of fare inspection results;
- b. Assessing the feasibility of establishing an internal fare evasion ticket appeal process, similar to Metrolinx (GO Transit); and
- c. Exploring ways to reduce travel time by Transit Fare Inspectors between their reporting and lunch locations and assigned routes.

27. The Board request the Chief Executive Officer, Toronto Transit Commission, to finalize updating the TTC By-law No.1 and enhance the Fare Inspection Policies and Procedures manual to ensure they are up to date and include sufficient details to facilitate consistent fare inspections.

28. The Board forward this report to City Council for information through the City's Audit Committee.

FINANCIAL IMPACT

Based on the data we collected and analyzed, TTC is estimated to have lost \$61 million in passenger revenue in 2018 due to fare evasion. In addition, according to TTC staff, \$3.4 million in annual revenue loss for 2018 was due to malfunctioning Metrolinx equipment.

The implementation of recommendations in this report will likely result in an increase in passenger revenue. The amount of passenger revenue increase resulting from implementing the recommendations in this report is not determinable at this time.

DECISION HISTORY

The Auditor General's 2018 Audit Work Plan, received by City Council in December 5, 2017, included a review of the efficiency and effectiveness of Toronto Transit Commission's (TTC's) Revenue Operations:

<https://www.toronto.ca/legdocs/mmis/2017/au/bgrd/backgroundfile-107813.pdf>

COMMENTS

TTC's total conventional passenger revenue (excluding Wheel Trans) for the year 2018 was \$1.162 billion, down \$1 million from \$1.163 billion in 2017. Passenger revenue represented 95 per cent of TTC's total operating revenue for both years. The basic adult fare was \$3.00 in 2017 and 2018 (for token/PRESTO, cash \$3.25), increased by \$0.10 from the \$2.90 fare in 2016.

Fare evasion is one of the risks causing loss of passenger revenue. The objectives of this Phase One audit were to assess the effectiveness and efficiency of TTC's controls intended to minimize revenue loss from fare evasion risks, including its fare inspection program.

To assess TTC's fare evasion rate, we conducted observations with TTC Fare Inspectors for a total of 136 hours on 315 streetcars (seven routes), 76 buses (26 routes), and 15 subway stations. We also reviewed 38 hours of TTC security camera footage for illegal entries at four automatic subway entrances. This audit work was conducted over a six-week period in November and December 2018. The instances of fare evasion during the observation period were identified by TTC Fare Inspectors with audit staff in attendance - observing and recording. Audit staff did not interact with passengers.

Based on the data we collected and analyzed, TTC is estimated to have lost **\$61 million** in passenger revenue in 2018 due to fare evasion. Moreover, according to TTC staff, an additional **\$3.4 million** in revenue loss for 2018 was due to malfunctioning Metrolinx equipment. The total estimated annual revenue loss of **\$64 million** (see table below) is probably understated, as we were not able to quantify the loss due to the malfunction of TTC's subway fare gate equipment and the use of crash gates at subway stations. We plan to review these other factors further and estimate the loss in the next phase of our audit.

	<u>Estimated Amount of Revenue Loss</u>
Fare Evasion:	
Bus	\$30.1 Million
Streetcar	12.2 Million
Subway	<u>18.4 Million</u>
Subtotal – Fare Evasion	\$60.7 Million
Equipment Functionality Issues:	
Functionality issues - Metrolinx Equipment (according TTC staff)	\$3.4 Million
TTC Fare gates (will be assessed during Phase 2 audit)	Unknown
Use of Crash gates	<u>Unknown</u>
Subtotal – Equipment Functionality	<u>\$3.4 Million</u>
Total Passenger Revenue Loss	\$64.1 Million

Based on our review, TTC's fare evasion rates are: **overall 5.4 per cent** (weighted average), streetcar **15.2 per cent**, bus **5.1 per cent**, and subway **3.7 per cent**.

The fare evasion rate on streetcars is high, averaging more than 1 in 10 passengers. This could be attributable to the Proof-of-Payment system on streetcars where there is no interaction between passengers and streetcar operators, as well as the multiple-door design of TTC's new streetcars. The design and functionality of subway fare gates make illegal entry easier, particularly at automatic subway entrances without the presence of TTC staff.

There is significant risk of fraudulent use of the Child PRESTO card. Under the current fare policy, children 12 years of age and under can ride TTC for free. During our six weeks of audit observation work on all three modes of transit covering many different times of the day on TTC, we did not come across ANY children aged 12 and under who were using the Child PRESTO cards. TTC Fare Inspectors identified 56 subway riders and 22 bus riders who were fraudulently using a Child PRESTO card during our audit observation period.

There are numerous serious control weaknesses with the issuance and monitoring of these cards, including a lack of visual distinction from the regular PRESTO card, no display available to help bus and streetcar drivers to determine if the rider is using a Child card, and uncertainty in the deactivation of cards found to be used fraudulently.

Fare inspection is one of the key elements in reducing fare evasion. TTC has a fare inspection program with 68 approved positions of Transit Fare Inspectors. The focus of the fare inspection program is currently on the streetcar routes. There are many opportunities to improve the efficiency and effectiveness of the fare inspection program, including reviewing the authority level and tools needed for Fare Inspectors to effectively and safely enforce TTC By-law No.1, improving the speed and reliability of the Fare Inspectors' PRESTO hand-held devices, and increasing actual inspection time.

The implementation of the 27 recommendations in our audit report will contribute to decreasing TTC's fare evasion rates and increasing passenger revenue. It will also improve the effectiveness and efficiency of its fare inspection program.

The audit report is attached as Attachment 1. Management responses to audit recommendations are also included in the Attachment.

CONTACT

Jane Ying, Assistant Auditor General, Auditor General's Office
Tel: 416 392-8480, Fax 416 392-3754. E-mail Jane.Ying@toronto.ca

Tara Anderson, Senior Audit Manager, Auditor General's Office
Tel: 416 392-0887, Fax 416 392-3754, E-mail Tara.Anderson@toronto.ca

SIGNATURE

Beverly Romeo-Beehler
Auditor General

ATTACHMENTS

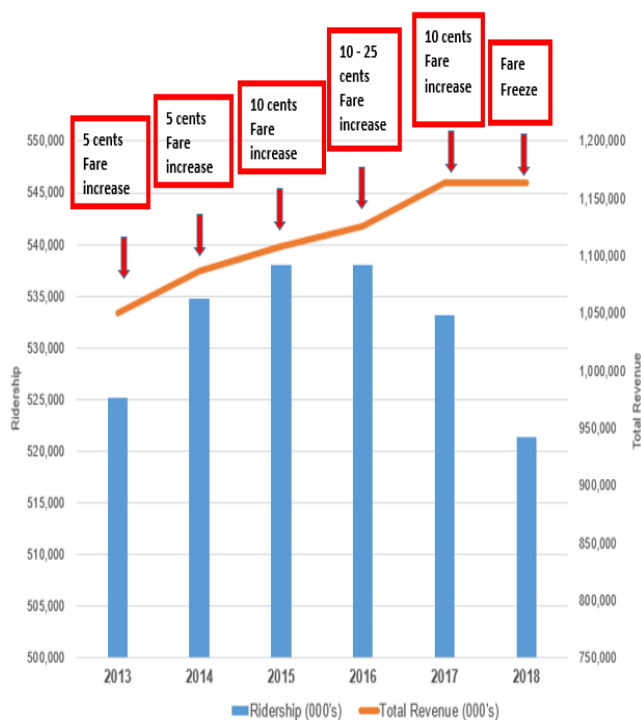
Attachment 1: Review of Toronto Transit Commission's Revenue Operations: Phase One – Fare Evasion and Fare Inspection

AUDIT AT A GLANCE

Review of Toronto Transit Commission's Revenue Operations: Phase One – Fare Evasion and Fare Inspection

WHY THIS AUDIT MATTERS

Fare evasion causes a loss of revenue – every transit agency faces this challenge. TTC's revenue rose between 2013 and 2017, likely due in part to fare increases. However, TTC's yearly ridership numbers have declined since 2016. But because TTC calculates ridership based on the number of passengers who pay instead of the number of passengers who ride, it's possible that ridership only appears to be declining, while fare evasion is worsening. Reducing fare evasion may alleviate the need to raise fares.



BY THE NUMBERS

- **\$1.162B:** TTC's total conventional passenger revenue in 2018 (excludes Wheel-Trans)
- **5.4%:** System-wide TTC fare evasion rate assessed in this audit
- **\$64M:** Estimated 2018 revenue loss
- **56 subway riders** within 22 hours of inspections caught fraudulently using TTC Child PRESTO card
- **136 hours** spent observing with TTC Fare Inspectors over 6 weeks and reviewing security footage
- **1% reduction in fare evasion = \$11 million** in additional passenger revenue

WHAT WE FOUND

A – Overall Passenger Revenue Loss

We estimate that TTC lost at least **\$64M** in passenger revenue in **2018** due to:

- \$61M from fare evasion
- \$3M from malfunctioning Metrolinx equipment (TTC's analysis)

Additional revenue losses from malfunctioning TTC subway fare gates and unattended "crash gates" could not be determined during this phase of the audit, so the estimated \$64M annual loss is likely understated.

B – Fare Evasion Rates

System-wide 5.4%: streetcar 15.2%, bus 5.1%, subway 3.7%

The high fare evasion rate on streetcars could be due to its Proof-of-Payment policy where there is no interaction between passengers and streetcar drivers, as well as the multiple-door design of the new streetcars. The design and functionality of subway fare gates make illegal entry easier, particularly at automatic subway entrances without presence of TTC staff.

C – Fraudulent Use of Child PRESTO Cards

TTC's Child PRESTO card, which provides unlimited free rides, is vulnerable to fraudulent use by people older than 12. During our audit, TTC Fare Inspectors within a short time identified 56 subway riders and 22 bus riders fraudulently using Child PRESTO cards. And we did not come across ANY children aged 12 and under using the Child PRESTO cards. The key problems are: a lack of visual distinction from the regular PRESTO card, no display available to help drivers determine if the passenger is using a Child card, lack of controls over the issuance of the cards, and uncertainty in the deactivation of cards found to be used fraudulently.

D – Fare Inspection Program

There are many opportunities to improve the efficiency and effectiveness of TTC's fare inspection program, including:

- Conducting a cost-benefit analysis to determine an optimal mix of Transit Fare Inspectors vs. Transit Enforcement Officers
- Reviewing the authority and tools of Fare Inspectors to ensure they can carry out their duties in a safe and effective manner
- Improving scheduling to ensure adequate coverage of routes and time periods
- Increasing actual fare inspection time

HOW RECOMMENDATIONS WILL BENEFIT THE CITY

Implementing the **27 recommendations** will help TTC to reduce its fare evasion rate and increase passenger revenue. It will also help to improve the effectiveness and efficiency of its fare inspection program.



Review of Toronto Transit Commission's Revenue Operations:

Phase One – Fare Evasion and Fare Inspection

February 21, 2019

Beverly Romeo-Beehler, CPA, CMA, B.B.A., JD, ICD.D, CFF
Auditor General

**AUDITOR
GENERAL**

TORONTO

Table of Contents

Executive Summary	1
Background	6
Audit Results	11
A. Overall Estimated Revenue Loss and Fare Evasion Rates	11
A. 1. Overall Impact on Revenue and Overall Fare Evasion Rate.....	11
A. 2. Previous TTC Fare Evasion Rates	15
A. 3. Streetcar Fare Evasion	19
A. 4. Bus Fare Evasion	22
A. 5. Subway Fare Evasion.....	24
B. Other Factors Impacting Passenger Fare Revenue	28
B. 1. Metrolinx Equipment	28
B. 2. TTC Fare Gates and Use of Crash Gates.....	32
C. Fraudulent Use of Child PRESTO Cards	35
C. 1. Identification of Fraudulent Use of Child PRESTO Cards	37
C. 2. Lack of Visual Distinction in PRESTO Cards.....	40
C. 3. Concession Type Unavailable to Bus and Streetcar Operators	41
C. 4. Control Issues with Issuance of PRESTO Cards.....	42
C. 5. Uncertainty with Deactivation of Cards Caught and Payment of Tickets.....	43
C. 6. Sale of Child PRESTO Cards on the Internet.....	44
D. TTC Fare Inspection Program	45
D. 1. Need for Re-assessing Inspectors' Authority Level and Personal Safety Risk.....	46
D. 2. Problematic PRESTO Hand-held Devices in Fare Inspections	49
D. 3. Need for More Effective Off-boarding Inspections	51
D. 4. Database for Previous Fare Evaders Not Available During Inspections	52
D. 5. Improving Resource Allocation and Scheduling.....	53
D. 6. Increasing the Actual Fare Inspection Time	55
D. 7. TTC By-law and Fare Inspection Policies and Procedures	57
Conclusion.....	58
Audit Objectives, Scope and Methodology	59
Exhibit 1: Specific Risks of Fare Evasion by Mode for TTC.....	63
Exhibit 2: Timeline of Key TTC Fare Policy Changes (2014 – 2018).....	65
APPENDIX 1: Management's Response to the Auditor General's Report Entitled: "Review of Toronto Transit Commission's Revenue Operations: Phase One – Fare Evasion and Fare Inspection".....	66

Executive Summary

Fare evasion is one of the risks causing loss of passenger revenue. Phase 1 of the Auditor General's audit of TTC's revenue operations focused on fare evasion and the estimated loss of passenger revenue.

The second phase will focus on the completeness of PRESTO revenue data received from Metrolinx and TTC's contract management.

TTC's ridership has been decreasing since 2016

TTC's total conventional passenger revenue (excluding Wheel Trans) for the year 2018 was \$1.162 billion, down \$1 million from \$1.163 billion in 2017. Since 2016, TTC's ridership has declined from 538 million passenger trips in 2016 to 521 million passenger trips in 2018.

Possible that the declining ridership numbers are affected by fare evasion

It is important to note that TTC's yearly ridership is a calculated number based on revenue collected, which is affected by fare evasion. Fare evasion reduces passenger revenue as well as TTC's calculated ridership number, as these two numbers are tied together.

To assess TTC's fare evasion rate, we conducted observations with TTC Fare Inspectors for a total of 136 hours on 315 streetcars (seven routes), 76 buses (26 routes), and at 15 subway stations. We also reviewed 38 hours of TTC security camera footage for illegal entries at four automatic subway entrances. This audit work was conducted over a six-week period in November and December 2018.

The instances of fare evasion during the observation period were identified by TTC Transit Fare Inspectors with audit staff in attendance - observing and recording. Audit staff did not interact with passengers.

TTC is estimated to have lost \$61 million due to fare evasion and an additional \$3.4 million in 2018 due to Metrolinx equipment issues

Based on the data we collected and analyzed, TTC is estimated to have lost \$61 million in passenger revenue in 2018 due to fare evasion. Moreover, according to TTC staff, \$3.4 million in revenue loss for 2018 was due to malfunctioning Metrolinx equipment.

The total estimated annual revenue loss of \$64 million (see table below) is probably understated as we were not able to quantify the loss due to malfunctioning TTC subway fare gate equipment and the use of crash gates¹ at subway stations. We plan to review these other factors further and will estimate the loss in the next phase of our audit.

Estimated Annual Passenger Revenue Loss

Type of Revenue Loss	Estimated Amount of Revenue Loss
Fare Evasion:	
Bus	\$30.1 Million
Streetcar	12.2 Million
Subway	<u>18.4 Million</u>
Subtotal – Fare Evasion	\$60.7 Million
Equipment Functionality Issues:	
Metrolinx Equipment Functionality issues (according to TTC staff)	\$3.4 Million
TTC fare gates (will be assessed during Phase 2 audit)	Unknown
Use of crash gates	<u>Unknown</u>
Subtotal – Equipment Functionality	<u>\$3.4 Million</u>
Total Passenger Revenue Loss	\$64.1 Million

5.4% - overall fare evasion rate

Based on our review, TTC's fare evasion rates are:

Streetcar	15.2 per cent
Bus	5.1 per cent
Subway	3.7 per cent
Overall	5.4 per cent (weighted average)

Proof of Payment system, lack of interaction with operator, and multiple doors on new streetcars could make fare evasion easier

The fare evasion rate on streetcars is high, averaging more than 1 in 10 passengers. This could be attributable to the Proof of Payment system on streetcars where there is no interaction between passengers and streetcar operators, as well as the multiple-door design of TTC's new streetcars.

Fare evasion rate in subways (3.7 per cent) is impacted by the design and functioning of TTC fare gates. According to TTC staff, the design of TTC fare gates ensures that passengers' safety is protected; however, based on our observations, they present easy opportunities for illegal entry and the risk is increased at automatic entrances without TTC staff present. In addition, malfunctioning TTC fare gates and TTC's use of crash gates further increase the loss of passenger revenue.

¹ "Crash gates" refer to TTC's practice of leaving the large accessibility fare gate open with a TTC staff member by the fare box to observe fare payment. This practice is done in high-volume subway stations to speed up passenger flow.

TTC has recently been promoting the Child PRESTO card

There is a significant risk of fraudulent use of TTC's Child PRESTO card. Under the current fare policy, children 12 years of age and under can ride TTC for free. TTC has recently been promoting the use of Child PRESTO cards to allow children to independently use the automatic fare gates at subway stations. The Child PRESTO card can be used for an unlimited number of free rides.

56 subway riders and 22 bus riders were found fraudulently using a Child PRESTO card by Fare Inspectors

During our subway and bus observations, we noted many instances of passengers fraudulently using the Child PRESTO card. In total, TTC Fare Inspectors identified 56 subway riders (within 22 hours of subway inspection) and 22 bus riders (within 34 hours of bus inspection) who were fraudulently using a Child PRESTO card during our audit observation period.

We did not see any children using the Child PRESTO card over our entire observation period

On the other hand, during our six weeks of audit observation on all three modes of transit covering many different times of the day on TTC, we did not come across ANY children aged 12 and under who were using the Child PRESTO cards. We did see parents letting their children through the TTC fare gates and children walking onto the bus and streetcar for free, which is fine with the current fare policy.

Significant risk of fraudulent use of the Child PRESTO card on TTC

There are numerous serious control weaknesses with the issuance and monitoring of these cards, including a lack of visual distinction from the regular PRESTO card, no display available to help bus and streetcar drivers to determine if the passenger is using a Child card, uncertainty in the deactivation of cards caught and tickets paid, and the availability of the cards for sale on the internet.

Fare inspection program consists of 68 Fare Inspectors

Fare inspection is one of the key elements in reducing fare evasion. TTC has a fare inspection program with 68 approved positions of Transit Fare Inspectors. The focus of the fare inspection program is currently on the streetcar routes.

The risk to personal safety is high for Fare Inspectors

Throughout our audit, we had many interactions with multiple Fare Inspectors. We found them to be professional and patient in explaining the violation and ticketing process to passengers. We also witnessed two incidents where the Inspectors were threatened and in one case assaulted by a passenger. In both instances, we observed that the Inspectors did not provoke or escalate the incidents. The risk to personal safety is high for Fare Inspectors, and they are not equipped with any defensive tool other than a protective vest. On the other hand, we are aware of complaints of Inspector conduct and use of excessive force with passengers.

Many ways to improve the efficiency and effectiveness of the existing fare inspection program

There are many opportunities to improve the efficiency and effectiveness of the fare inspection program, including:

- Reviewing the level of authority, tools and uniform provided to Transit Fare Inspectors to ensure they can carry out their duties in a safe and effective manner
- Conducting a cost-benefit analysis to determine an optimal mix of Transit Fare Inspectors vs. Transit Enforcement Officers
- Increasing the speed and reliability of the PRESTO hand-held devices for checking fare payment
- Improving scheduling to ensure adequate coverage of routes and time periods and increasing actual fare inspection time

Strategies to address fare evasion should not be limited to fare inspection alone

TTC's strategies to reduce fare evasion should not be limited to effective fare inspection alone. In addition, the full implementation of the PRESTO card will not help reduce fare evasion unless proper controls are in place.

Other factors including the design of transit vehicles and subway entrances are important controls for fare evasion

Other controls that contribute to the reduction of fare evasion include the design of transit vehicles and subway entrances/gates, fully functioning and user-friendly equipment for passengers to make payments easily, controls around fare payment, and the ability for bus and streetcar drivers to view the concession type of fares paid.

Passengers also play an important role

Passengers also play an important role in ensuring that they pay the appropriate fare.

TTC has made many changes to improve customer service

In recent years, a number of key operational decisions and policy changes have been made by TTC to improve customer service. Examples of these include multiple door boarding, Proof-of-Payment policy on streetcars, and the replacement of turnstiles with new fare gates at subway stations.

Balance good customer service with controls over fare evasion

Improving customer service is very important and should be continued. However, some of the key decisions and changes have also increased the risk of fare evasion. It is equally important to ensure that appropriate controls are in place, including those that reduce fare evasion and its resulting revenue loss.

A certain level of fare evasion is unavoidable, but it is important to reduce it

Fare evasion is a challenge faced by every transit agency, and a certain level of fare evasion is unavoidable. Reducing fare evasion may help alleviate the need to raise fares in the future, which is important to all passengers.

Our audit provides a total of 27 recommendations, some of which the TTC can implement in the short-term to help reduce revenue loss, while others need longer-term policy and system changes. Some of our key recommended changes and the timeline for their implementation are outlined below.

Examples of key recommended changes and projected timeline for completion:

Short-term (within six months)
<p>Subway Entrances</p> <ul style="list-style-type: none"> ➤ Train and require fare collectors in the booth to close the crash gates when unattended by staff. ➤ Reduce illegal entries at automatic entrances (e.g. monitor security footage to determine high-risk entrances, extend fare inspection program to high-risk entrances, and shorten opening hours of entrances with low passenger volume). ➤ Timely response to malfunctioning TTC fare gates (e.g. assign staff to place barriers in front of broken gates and re-direct passengers to enter through other functioning gates). <p>Child PRESTO Cards</p> <ul style="list-style-type: none"> ➤ Work with Metrolinx to determine the feasibility of temporarily suspending the Child PRESTO card on TTC until appropriate controls are in place. The City's child ride free policy can continue without the Child PRESTO card. <p>Recovery of Revenue Loss from Metrolinx Equipment</p> <ul style="list-style-type: none"> ➤ Recover lost passenger revenue due to malfunctioning Metrolinx vending machines and PRESTO card readers. <p>Fare Inspection Program</p> <ul style="list-style-type: none"> ➤ Review level of authority and tools provided to Fare Inspectors to ensure they can carry out their work safely and effectively. ➤ Improve accuracy of fare evasion data collected by Fare Inspectors. ➤ Improve fare inspection program efficiency and effectiveness (e.g. improve training, set realistic performance expectations, monitor staff performance, improve scheduling and route coverage, increase actual inspection time by Inspectors). <p>Customer Awareness</p> <ul style="list-style-type: none"> ➤ Raise customer awareness of the importance of paying proper fare.
Intermediate (less than one year)
<p>Subway Entrances</p> <ul style="list-style-type: none"> ➤ Implement longer-term measures to address illegal entries at automatic subway entrances, including the design of station entrances and fare gates. ➤ Improve the functionality of subway fare gates to reduce frequency of malfunctioning equipment. ➤ Expedite work on fare gate sensors and fare gate event reporting to determine high-risk subway entrances. <p>Buses and Streetcars</p> <ul style="list-style-type: none"> ➤ Provide a display of the type of PRESTO concession to bus and streetcar operators. ➤ Provide training to bus operators on fare dispute key and analyze the data to help with strategic resource allocation. ➤ Expand fare inspection program to buses. ➤ Explore ways to prevent and reduce fare evasion on streetcars (under Proof-of-Payment policy). <p>Child PRESTO Cards</p> <ul style="list-style-type: none"> ➤ Work together with Metrolinx to improve controls over the Child PRESTO card. In particular, negotiate with Metrolinx to provide visually distinct PRESTO cards and a different light and sound on PRESTO card readers for Child PRESTO cards from other concession types.
Long-term (more than one year)
<p>Reduce and Publicly Report on Fare Evasion</p> <ul style="list-style-type: none"> ➤ Set acceptable targets for fare evasion and develop short- and long-term strategies to reduce fare evasion on all modes of transit. ➤ Accurately measure fare evasion rate and report it to the TTC board annually. <p>Ticket Appeal Process</p> <ul style="list-style-type: none"> ➤ Explore setting up an internal fare evasion ticket appeal process, similar to what Metrolinx uses.

Conclusion

Based on the data we collected and analyzed, we estimated that TTC's overall fare evasion rate is 5.4 per cent for all three modes of transit. TTC's annual revenue loss due to fare evasion and other related factors is estimated to be at least \$64 million. A one per cent reduction in fare evasion results in \$11 million in additional passenger revenue.

27 recommendations to help reduce fare evasion and annual revenue loss

The implementation of the 27 recommendations contained in this report will contribute to decreasing TTC's fare evasion rates and will result in increased passenger revenue. It will also improve the effectiveness and efficiency of its fare inspection program.

We express our appreciation for the co-operation and assistance we received from management and staff of the Toronto Transit Commission.

Background

This audit examines TTC's fare evasion on all three key modes of transit and the estimated loss to passenger revenue

Fare evasion is when passengers do not pay their fare or pay less than the correct fare. Fare evasion is one of the risks impacting loss of passenger revenue in any transit system. An effective fare inspection program can help to reduce this risk. This audit examines TTC's fare evasion on its buses, streetcars, and subways, and the estimated loss to passenger revenue from fare evasion and other related factors. Our audit also identified ways that TTC can improve its fare inspection program.

Revenue and Ridership Trend

TTC has about 3,200 vehicles in its revenue fleet

TTC has approximately 3,200 vehicles in its revenue fleet, with buses representing the majority at 1,920 (59 per cent), followed by 848 subway rail cars (26.1 per cent), 241 streetcars (7.4 per cent), 212 Wheel-Trans buses (6.5 per cent), and 28 Scarborough Rapid Transit cars (1 per cent).

95% of TTC's total operating revenue was from passenger revenue

TTC's total conventional passenger revenue (excluding Wheel Trans) for the year 2018 was \$1.162 billion, down \$1 million from \$1.163 billion in 2017. Passenger revenue represented 95 per cent of TTC's total operating revenue in 2018. The basic adult fare was \$3.00 in 2017 and 2018 (for token/PRESTO; cash fare is \$3.25), which increased by \$0.10 from the \$2.90 fare in 2016.

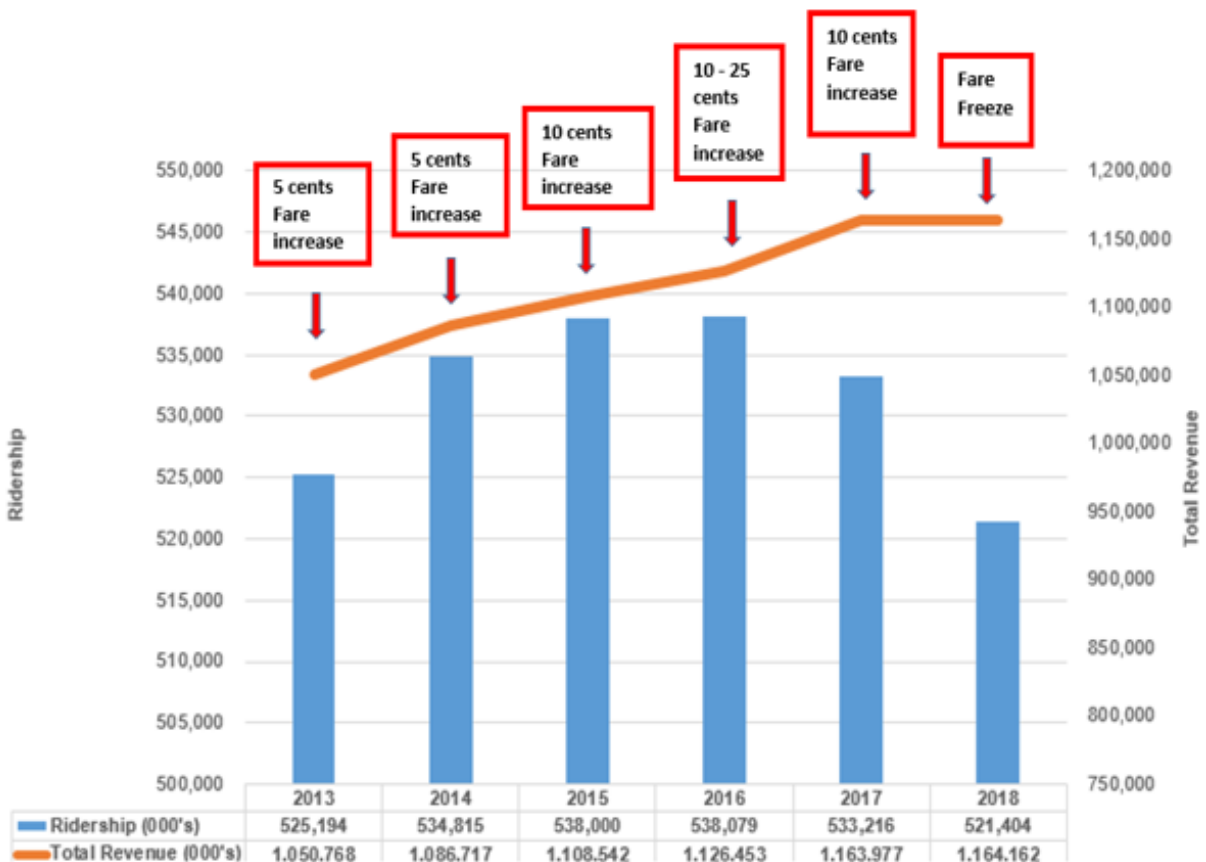
Figure 1 shows that, from 2013 to 2017, revenue (depicted by the orange line) continued to rise likely due to annual fare increases. The increasing trend in revenue stopped in 2018 - the only recent year when there was no fare increase.

TTC's ridership has decreased since 2016

Figure 1 also shows that TTC's ridership (shown as the blue bars) grew steadily from 2013 to 2015, but starting in 2016 there has been a reversed trend in ridership growth. Since 2016, ridership has declined from 538 million passenger trips in 2016 to 521 million passenger trips in 2018.

If TTC's annual ridership numbers accurately reflect the number of passengers using the TTC, this would mean there were fewer passengers using TTC in 2018 (521 million) than five years ago in 2013 (525 million).

Figure 1: TTC's Ridership and Revenue Trend (excluding Wheel-Trans) from 2013 to 2018



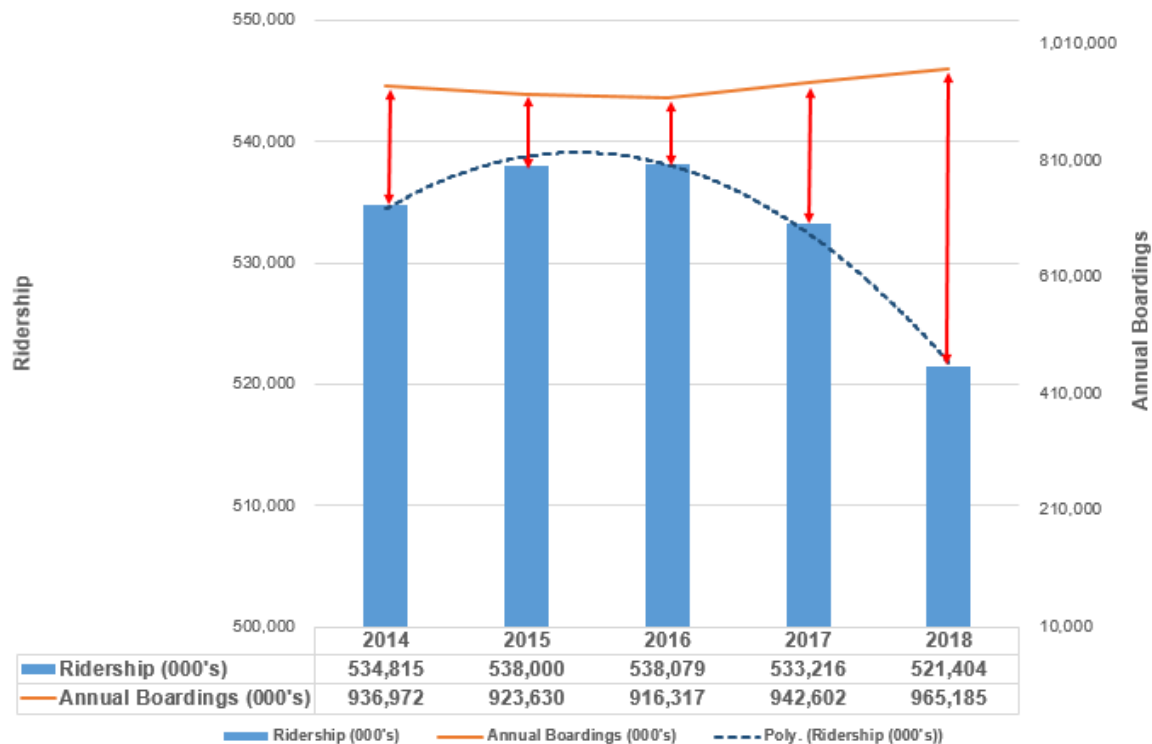
But is it true that fewer people were using the TTC in recent years as the declining ridership numbers suggest?

This may not be the case because:

First, the yearly ridership numbers are calculated by TTC based on revenue collected². Under this approach when passengers evade fare, they would not be accounted for in the revenue and would therefore not be accounted for in the ridership number. This would make it appear as though ridership is declining, even though it may not be.

Second, despite the lowering ridership numbers, TTC's own service planning data (i.e. Boardings³) shows that there has been a steady rise of passengers on board TTC vehicles from 2016 to 2018 (see the orange line in Figure 2). The widening gaps between service planning data (orange line) and the yearly calculated ridership number (blue bars) could be indicative of worsening fare evasion and revenue leakage since 2016.

Figure 2: Comparison of Annual Boardings vs. Ridership



² After adjusting for two-hour transfers and free child rides.

³ Annual Boardings are the number of customer riders in each vehicle, including transfers from another mode on the customer's same journey and including non-paying passengers. These numbers are estimated by TTC's service planning staff based mainly on manual counts done once a year on all modes of revenue vehicles and using Automated Passenger Count where available. As per TTC staff, 75% of buses and some streetcars have Automatic Passenger Count (APC). APC is when a device is installed in the vehicle and it counts the entry and exit of passengers from the vehicle. None of the subways have APC devices.

Fare Payment Methods

TTC contracted with Metrolinx in 2012 to integrate and operate the PRESTO fare card system

In November 2012, TTC contracted with Metrolinx to integrate and operate the PRESTO fare card solution on its transit network for 15 years plus options for renewal. The contract stipulated that Metrolinx provides a managed service to the TTC, where all PRESTO-related hardware and software would be designed, procured, installed, maintained and operated by Metrolinx, including subway stations, surface stops, and surface vehicles (buses and streetcars). In return, Metrolinx would be compensated with a commission of 5.25 per cent, inclusive of HST. As of the end of 2016, PRESTO cards could be accepted for fare payment across the entire TTC network.

At the end of 2016, PRESTO cards could be accepted across entire TTC network

There are various types of fare media that passengers may use

Passengers on TTC may currently pay their fares with PRESTO cards, tokens, tickets, passes or cash. Monthly Metropasses were discontinued after December 31, 2018. PRESTO cards can be loaded with money or a monthly pass. When loaded with money, a single fare is deducted when the card is tapped on the TTC.

TTC is in the process of phasing out its legacy fare media to make PRESTO cards its predominant form of fare payment

The TTC is in the process of phasing out the use of passes, tickets, and tokens (collectively known as legacy fare media), and migrating to the PRESTO card system. TTC is planning to introduce the sale of disposable paper PRESTO tickets in 2019, and has now made monthly passes only available on PRESTO cards. Starting in 2019, PRESTO has become the predominant form of fare payment, according to TTC staff.

Incentives to encourage passengers to use the PRESTO card on TTC such as the 2 hour transfer

In addition to the above planned changes, TTC and Metrolinx are encouraging passengers to use PRESTO cards through the incentive of a \$1.50 discount (subsidized by the Provincial government) when transferring between the TTC and GO Transit, available only to PRESTO card passengers. The two-hour transfer was another incentive, introduced on August 26, 2018. It allows PRESTO passengers to hop on and off TTC as much as they need to within a two-hour period.

PRESTO adoption rate has increased to approximately 77% at the end of January 2019

TTC staff reported that the PRESTO adoption rate at the end of January 2019 was approximately 77 per cent, up from 45.5 per cent at the end of December 2018.

Different Design of Fare Systems

Various strategies to reduce the risk of fare evasion

Transit agencies in general use various strategies to mitigate the risk of fare evasion, including the design of transit vehicles and subway fare gates/entrances, fully functioning and user-friendly equipment for passengers to make payment easily, and an effective fare inspection system. Passengers also play an important role in ensuring they pay the appropriate fare.

Fare evasion is generally more difficult in closed transit systems (payment required prior to entry) vs. open transit systems (Proof-of-Payment honour system)

TTC has a mix of closed and open fare systems. With a closed system (e.g. turnstiles in a subway station) where fare payment is required prior to entry into the transit system, fare evasion is more difficult. In open systems with a Proof-of-Payment system, which is used for streetcars, with no driver contact with passengers and multiple doors for entry/exit, fare evasion is easier. The justification for open systems is speed and availability of service for passengers as well as increased accessibility, in order to increase customer satisfaction and ridership. In addition, when the equipment to purchase fares is not working or not working quickly enough, it further increases the risk of fare evasion in open systems.

The specific fare evasion risks by mode of transit are described in the sections below and summarized in Exhibit 1.

How we conducted our Fare Evasion Study

Total 6 weeks of fare evasion observation, with 2 weeks for each mode of transit

In order to measure fare evasion rate, we conducted six weeks of fare evasion observation, with two weeks on each of the three modes of transit (streetcar, subway, bus) in November and early December 2018.

TTC Transit Fare Inspectors (Fare Inspectors) conducted inspection work, while the Auditor General's Office staff observed and recorded. Audit staff did not interact with passengers. Both Fare Inspectors and audit staff used their own fare evasion field data collection forms. Inspection results for the numbers and types of fare evasion were compared with Fare Inspectors at the end of each round of inspection.

136 hours of observation covered 7 streetcar routes, 26 bus routes and 15 subway stations

To ensure we obtained a sufficient sample size, we deployed on average four staff members for each observation day, and in total, spent 136 hours in observation over the six-week period. We conducted observations on 315 streetcars (seven routes), 76 buses (26 routes) and 15 subway stations. In total, over 24,000 passengers were inspected by TTC Fare Inspectors during our six-week observation period (including on-boarding and off-boarding, and uniformed and plain-clothes Inspectors).

Reviewed 38 hours of subway camera footage

We also reviewed 38 hours of camera footage for illegal entries at four subway stations with 4,626 passengers entering fare gates.

Details of our methodology and limitations are provided in the Audit Objectives, Scope and Methodology section of this report.

Audit Results

This section of the report contains the findings from our audit work followed by specific recommendations.

A. Overall Estimated Revenue Loss and Fare Evasion Rates

A. 1. Overall Impact on Revenue and Overall Fare Evasion Rate

TTC is estimated to have lost \$61 million due to fare evasion plus \$3.4 million due to malfunctioning Metrolinx equipment in 2018

Overall Estimated Revenue Loss

Based on our audit results, TTC is estimated to have lost **\$61 million** in passenger revenue due to fare evasion. Moreover, according to TTC staff, in 2018 **\$3.4 million** in revenue loss was due to malfunctioning Metrolinx equipment. The total estimated revenue loss for 2018 is at least **\$64 million**.

The overall revenue loss estimate is likely understated

Our estimated \$64 million annual revenue loss is probably understated due to two reasons.

Revenue loss caused by TTC fare gates and crash gates at subway stations cannot be quantified during this audit phase

First, there are other factors that cause TTC revenue loss, such as the functionality of its subway fare gate equipment and its use of crash gates at subway stations. Since we were unable to quantify the estimated loss from these factors during this phase of our audit, our estimated annual revenue loss of \$64 million does not account for the loss from these other factors.

We plan to review these other factors further and will estimate the loss in the next phase of our audit. However, we provide our findings and recommendations relating to these other factors in Section B of this report because we believe there are opportunities for TTC to take immediate actions to reduce revenue loss in these areas.

Fare evasion during peak rush hours could not be assessed and is not accounted for in the fare evasion rate and estimated revenue loss

Second, our fare evasion rates do not cover peak rush hour traffic. Our fare evasion numbers were based on inspection results by TTC's Fare Inspectors, who for practical reasons were unable to check fares during peak rush hours because TTC vehicles were very congested. We believe that fare evasion rates during peak rush hours could be higher when riders may know they are unlikely to encounter Fare Inspectors on board. As a result, the fare evasion rates from our audit could be understated. The breakdown of the estimated total passenger revenue loss is shown in table 1 below.

Table 1: Estimated Total Passenger Revenue Loss

Type of Revenue Loss	Estimated Amount of Revenue Loss
Fare Evasion:	
Bus	\$30.1 Million
Streetcar	12.2 Million
Subway	<u>18.4 Million</u>
Subtotal – Fare Evasion	\$60.7 Million
Equipment Functionality Issues:	
Metrolinx Equipment Functionality issues (according to TTC staff)	\$3.4 Million
TTC fare gates (to be assessed in Phase 2 audit)	Unknown
Use of crash gates	<u>Unknown</u>
Subtotal – Equipment Functionality	<u>\$3.4 Million</u>
Total Passenger Revenue Loss	\$64.1 Million

5.4% - overall fare evasion rate

Fare Evasion Rate and Projected Revenue Loss by Mode of Transit

Based on our sample observations, we estimated that TTC's overall fare evasion rate is 5.4 per cent for all three modes. The fare evasion rate for each mode of transit is:

Streetcar 15.2 per cent⁴
 Bus 5.1 per cent⁵
 Subway 3.7 per cent⁶
Overall 5.4 per cent (weighted average)⁷

The breakdown of the estimated revenue loss⁸ and fare evasion by mode is shown in table 2 below.

Table 2: Total Estimated Revenue Loss and Fare Evasion by Mode

Mode	2018 Annual Ridership (A)	Fare Evasion Rate (B)	Annual Fare Evaders (A*B= C)	TTC's Average Fare Price (D)	Annual Revenue Loss (C*D)
Bus	264,538,000	5.11%	13,517,892	\$2.23	\$30,144,899
Streetcar	35,866,000	15.24%	5,465,978	\$2.23	\$12,189,132
Subway	221,000,000	3.73%	8,243,300	\$2.23	\$18,382,559
Total	521,404,000		27,227,170		\$60,716,590

⁴ Streetcar fare evasion rate at 15.2%, accurate to plus or minus 1.12%, 19 times out of 20

⁵ Bus fare evasion rate at 5.1%, accurate to plus or minus 1.04%, 19 times out of 20

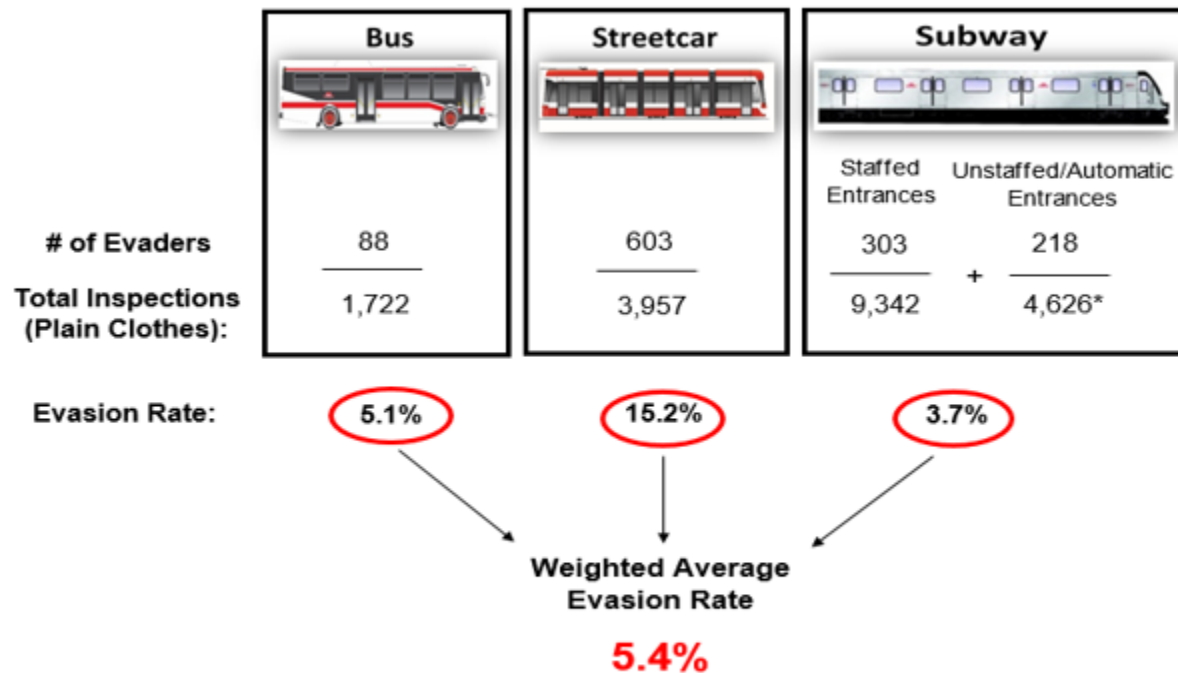
⁶ Subway fare evasion rate at 3.7%, accurate to plus or minus 0.31%, 19 times out of 20

⁷ Weighted average calculation is based on the number of annual Boardings by mode of transit. The weightings are Bus 45%, Streetcar 10%, Subway (staffed entrances) 40%, and Subway (unstaffed/automatic entrances) 5%. $(0.45*0.0511) + (0.10*0.1524) + (0.40*0.0324) + (0.05*0.0471) = 5.4\%$.

⁸ We used annual ridership as the basis for calculating revenue loss instead of the number of Boardings because Boardings includes free transfers.

Our methods used to measure fare evasion are described in the Audit Objectives, Scope and Methodology section of this report. The fare evasion rate broken down by mode, with numbers of evasion and passengers inspected, are detailed in figure 3 below:

Figure 3: Fare Evasion Rate by Mode, with Total Number of Evasions and Total Inspections (based on Plain Clothes inspection results)



*Observations were conducted for four unstaffed automatic entrances for 9.5 hours each and extrapolated to TTC's 56 unstaffed/automatic entrances

On average, more than 1 in 10 streetcar riders did not pay the appropriate fare

Among its three modes of transit, streetcars have a high fare evasion rate at just over 15 per cent, averaging more than one in ten streetcar riders not paying the appropriate fare. Details of streetcar fare evasion are provided in Section A.3.

Illegal Entries – Subway Automatic Entrances

The design of the TTC fare gates increases the risk of passengers not paying to enter them, referred to as illegal entries. These illegal entries may be more common at the automatic subway entrances i.e. entrances that don't have the presence of a fare collector or a subway station supervisor. As of January 2019, the TTC has 56 automatic entrances operating at 42 subway stations.

218 instances of illegal entries observed

We observed 218 instances of illegal entries from reviewing four automatic entrances security camera footage over a period of 9.5 hours at each station.

Immediate actions, and short- and long-term strategies are needed to reduce revenue loss

Going Forward

TTC needs to take immediate actions and develop short- and long-term strategies to reduce its fare evasion rate as it causes significant annual revenue loss to the Agency. Part of TTC's strategies should also include setting an acceptable target for fare evasion, yearly reporting of its fare evasion rate to the TTC Board, and increasing customer awareness.

Customer awareness plays an important role in reducing fare evasion going forward

Customer Awareness

Although the majority of passengers do pay their fares diligently, all passengers are affected when some do not. As seen above, an unpaid \$3 fare can quickly turn into several millions of dollars when many people are not paying. Customer awareness of the impact of fare evasion plays an important role in the overall well-being of our transit system.

Passengers need to be made aware of the impact of fare evasion on TTC

Passengers need to be made aware of the impact of fare evasion on TTC. Just as shoplifting affects the ability of retail stores to keep their prices low, fare evasion affects transit agencies in a similar way. Passengers should also receive more education on how the PRESTO card payment process works, the Proof-of-Payment system, and the consequences of a \$235 ticket if found to be evading fare. Passengers should also be made aware of the City of Toronto's Fair Pass program designed to assist eligible adult residents receiving Ontario Disability Support Program or Ontario Works financial assistance.

Policies and decision-making need to balance customer service with risk of fare evasion

Balancing Good Customer Service with Controls over Fare Evasion

In recent years, TTC has made significant strides in improving customer services. Many of its recent policies and vehicle and equipment design features are made with customer service in mind. Examples of these are multiple-door boarding and the Proof-of-Payment policy for streetcars, the new fare gate design at subway stations, and the promotion of Child PRESTO cards. Improving customer service is very important and should be continued. But equally important is reducing fare evasion and its resulting revenue loss. Reducing fare evasion may help alleviate the need for TTC to raise fares, benefiting all TTC passengers.

Recommendations:

- 1. The Board request the Chief Executive Officer, Toronto Transit Commission, to set acceptable targets for its fare evasion rates (by mode and overall) and to develop short and long-term strategies to reduce the fare evasion rates and the resulting revenue loss, while ensuring good customer service.**

2. The Board request the Chief Executive Officer, Toronto Transit Commission, to raise customer awareness and understanding of the importance of paying the appropriate fare, as well as the PRESTO card payment process, Proof-of-Payment system, and consequences if found evading fare.

Our findings and recommendations specific to each mode of transit and revenue loss factor are presented in the following report sections. But first we need to explain why our estimated overall fare evasion rate (5.4 per cent) is substantially higher than the 2 per cent that TTC has been reporting over the past several years.

A. 2. Previous TTC Fare Evasion Rates

TTC has been publicly reporting its overall system-wide fare evasion rate as 2% for the last seven years

TTC has been publicly reporting its overall system-wide fare evasion rate as 2 per cent and \$20 to \$25 million in revenue loss since 2011. This rate appears to come from TTC's Internal Audit's 2011 report on fare evasion.

In staff reports and committee meetings in 2017 and 2018, senior TTC staff cited a 1.8 per cent fare evasion rate for streetcars based on 2017 fare inspection results.

Table 3 below summarizes the TTC reports and meetings where staff reported either the 2 per cent or the 1.8 per cent fare evasion rate.

Table 3: Summary of Public Meetings and TTC Reports Referring to Fare Evasion Rate and Revenue Loss

TTC Document/Meeting (report/meeting date)	Fare Evasion rate mentioned	Related revenue loss per year mentioned
TTC 2012 Operating Budget (June 2011)		\$10M – 20M
2014 Time Based Transfer (January 2014)	Table from 2011 Internal Audit report – 1.4% fare evasion rate and 5% for invalid transfers	\$20.5M
Opportunities to Improve Transit Service in Toronto (August 2014)		\$20M
2014 TTC Transit Enforcement Annual report to the TTC and TPS (September 2015)	3 months streetcar fare inspection results, Oct-Dec 2014 (3.8%, 2.6%, 2.4%)	
2016 Ridership Update – TTC Board Meeting (March 23, 2016)	Fare evasion "in the range of" 2% 2% system-wide fare evasion rate	-
2016 Ridership Update Report (July 11, 2016)	Monthly average of 2.7% (streetcars only)	-
Transit Fare Inspection and Enforcement Model Update – TTC Board Meeting (December 20, 2016)	2.7% (streetcars only)	- \$20M

TTC Document/Meeting (report/meeting date)	Fare Evasion rate mentioned	Related revenue loss per year mentioned
	Overall fare evasion in 2-3% range	
Toronto City Council - Budget Committee Meeting (December 14, 2017)	2% last audited figure for system-wide fare evasion 1.6-1.8% (streetcars only)	\$20-\$25M
Revenue Protection Initiatives Update (April 2018) – TTC Board Meeting	1.8% as of 2017 (streetcars only), (2016 3.1%, 2015 2.5%)	-
2017 TTC Transit Enforcement Annual Report to the TTC and TPS (July 2018)	1.8% as of 2017 (streetcars only)	-

Compared to the previously reported rates, our audit found a significantly higher fare evasion rate – 5.4 per cent system-wide, and 15.2 per cent on streetcars. As such, it became necessary for us to review how the 2 per cent in the 2011 TTC Internal Audit report and the 1.8 per cent from 2017 TTC fare inspection results were determined. Our review results are summarized below.

The 2 per cent fare evasion rate from TTC's 2011 Internal Audit

None of the TTC Internal Audit reports on fare evasion were presented to the TTC Board

TTC's Internal Audit conducted fare evasion measurements in 2009, 2010, 2011 and 2014. The 2009, 2010 and 2011 reports were presented to the TTC Audit Committee (currently the Audit and Risk Management Committee) as confidential reports, but not to the TTC Board. There is no record that the 2014 Internal Audit report was presented to the TTC Audit Committee or to the TTC Board. To be transparent, we recommend that future TTC Internal Audit reports on fare evasion be made public.

In reviewing the 2011 and 2014 Internal Audit reports, we have some questions about the methodology and the scope of the work.

2011 Internal Audit study noted higher fare evasion rates in specific areas

Although the 2011 study continued to be used as the source of TTC's publicly reported system-wide fare evasion rate of 2 per cent (and \$20.5 million estimated total passenger revenue loss), the audit scope did not include buses and only included one streetcar route. There were also much higher evasion rates for certain areas examined, including 13.8 per cent fare evasion for discounted Metropasses, 5.4 per cent on streetcars, and 5 per cent for invalid transfers. However, these were not mentioned when the 2 per cent was publicly reported.

Many changes have occurred since 2011 that have increased the risk of fare evasion such as new streetcars, Proof-of-Payment system, and revised fare enforcement policy for vehicle operators and collectors

It is important to note that the 2011 Internal Audit report was conducted prior to many changes that might have increased the risk of fare evasion, including the introduction of the new streetcar Low Floor Rail Vehicles (LFRVs), the full implementation of the Proof-of-Payment system on streetcars, introduction of PRESTO and the Transit Fare Inspection Program, and the revised fare enforcement policy for bus and streetcar operators and fare collectors. In our view, more care should have been taken when referring to the 2011 rate by TTC management staff in recent years.

See Exhibit 2 for a timeline of the key fare policy changes made between August 2014 and December 2018.

5% fare evasion rate on a streetcar route found by TTC's 2014 Internal Audit study

The 2014 Internal Audit study was specific to the one Proof-of-Payment streetcar route which was found to have a five per cent fare evasion rate and 23 per cent for passengers entering the rear doors without Proof-of-Payment. The results from this report were not presented to the Audit Committee or the Board.

2016 consultant report measured overall fare evasion rate at 4.4%

TTC engaged an external consulting company to conduct a fare evasion study in the first half of 2016. Their overall fare evasion rate was measured at 4.4 per cent (bus 4.89 per cent, subway 4.32 per cent, and streetcar 2.85 per cent).

TTC did not publish the report due to its concerns about methodology

However, senior management had concerns about the consultant's methodology, and did not accept the rates of this study and therefore did not report them publicly.

Note that the full implementation of PRESTO and TTC fare gates had not yet occurred at the time of this study.

The previously reported 1.8 per cent streetcar fare evasion rate

In 2018, TTC staff reported 1.8 per cent as its streetcar fare evasion rate based on its 2017 Transit Fare Inspectors' (Fare Inspectors) inspection results. However, in conducting our audit work, we noted that this rate could be inadvertently understated.

Instead of recording the actual number of passengers inspected, the estimated number of passengers on the streetcar was recorded

For TTC to calculate the fare evasion rate, Fare Inspectors need to record the number of passengers inspected on streetcars as the denominator. During our audit observations on streetcars, we noted that instead of recording the actual number of passengers inspected, most Fare Inspectors were recording an estimated number of passengers on the streetcar.

The impact is an understated evasion rate caused by inflated denominator in the calculation

There were significant differences in our results for the number of passengers inspected compared to the Fare Inspectors' results. In some cases, the Fare Inspectors' estimate was almost twice our inspected numbers. The impact is that the denominator for the fare evasion rate calculation from the fare inspection program was erroneously inflated, resulting in an understated fare evasion rate.

A potential cause may be the unwritten target of 500 inspections per 12-hour shift, which may be difficult to achieve during on-board inspections at times

When asked why they recorded an estimated number of passengers, Fare Inspectors explained that they have an unwritten target of 500 inspections per 12-hour shift, and that it can be difficult to achieve this target at times during on-board inspections for various reasons (e.g. number of tickets issued, slowness of PRESTO hand-held devices combined with increased adoption of PRESTO card, travel time, inability to board congested streetcars). There was some apprehension of possibly being disciplined for not achieving this target.

The issue appeared to be wide-spread and not limited to a few Fare Inspectors

Throughout our audit, we had many interactions with multiple Fare Inspectors. We observed that this practice of estimation appeared to be an ingrained, common practice. This calls for better training to ensure all Fare Inspectors understand the appropriate data to be collected, how the data is used, and how their work is important for the TTC and passengers.

Fare Inspectors would benefit from clearly communicated written targets and realistic performance expectations

Equally important is for management staff to develop realistic and clear performance targets for Fare Inspectors, conduct ongoing monitoring of work performed, as well as undertake regular reviews of the data collected to ensure they are accurate and complete.

Recommendations:

- 3. The Board request the Chief Executive Officer, Toronto Transit Commission, to:**
 - a. Accurately measure and publicly report on the fare evasion rate every year; and**
 - b. Reports from Internal Audit on fare evasion study should be made public.**

4. The Board request the Chief Executive Officer, Toronto Transit Commission, to further improve the fare inspection program by ensuring:
 - a. Adequate training to Fare Inspectors on data collection and why this work is important to Toronto Transit Commission;
 - b. Development of realistic and clear performance expectations; and
 - c. Implementation of ongoing monitoring of staff performance and regular review of inspection data.

A. 3. Streetcar Fare Evasion



Streetcars operate in an open system, which means that passengers are required to have valid proof of payment such as a PRESTO card, paper transfer or TTC pass, when travelling on the TTC, to prove they have paid their fare. Proof-of-Payment is required on all streetcar routes and streetcars are marked with a Proof-of-Payment sign.

It is relatively easy for passengers to board a Proof-of-Payment streetcar without having paid their required fare. TTC allocates Transit Fare Inspectors to streetcars to inspect fares during the on-boarding and off-boarding of passengers at subway stations. The penalty if caught evading fare ranges from \$235 to \$425/ticket, although it is typically \$235/ticket.

The design of TTC's new streetcars and its Proof-of-Payment policy increase the risk of fare evasion

TTC introduced new streetcars in 2014, which have four doors for entry/exit and are designed to allow **no** interaction between passengers and the driver, who is separated behind a ceiling-to-floor plastic divider. TTC has been gradually introducing these new streetcars from three in 2014 to 105 in 2018.

Overall Streetcar Fare Evasion Rate

Streetcar fare evasion rate was found to be 15.2%

Based on our observation of nearly 4,000 passenger inspection results by TTC's Fare Inspectors (plain clothes and on-boarding inspections) in six routes (of total 10 routes), we calculated that the fare evasion rate on streetcars was 15.2 per cent. Note that this rate may still be understated because Fare Inspectors were not able to board or move along congested streetcars during peak rush hours.

Our streetcar fare evasion rate is substantially higher than TTC's prior consulting study in 2016 (2.85 per cent). This could be due to the small number of the new multiple-door-boarding streetcars and the early stage of the Proof-of-Payment policy for streetcars in 2016.

Industry benchmarking rate for streetcar not available

We were not able to find industry benchmarking standards specific to streetcars, as TTC is one of the few remaining transit agencies that has streetcars. Most other transit agencies are now using light rail transit instead. However, the rate is in the double digits, which is high.

Factors Affecting Fare Evasion on Streetcars

Fare evasion was significantly higher for plain clothes inspections vs uniform inspections on streetcars

There was a significant difference in the fare evasion rate between **uniformed** and **plain clothes** Fare Inspectors, as shown in Table 4. The fare evasion rate while Inspectors were in plain clothes (15.2 per cent) was significantly higher than the rate (9.49 per cent) when they were in uniform. The results are highly statistically significant.

Based on our observations, when passengers saw uniformed Inspectors on board, a number of them proceeded to pay fares or stopped boarding the streetcars. This suggests that plain clothes Inspectors are more effective in assessing the true fare evasion rate.

Table 4: Fare Evasion Rate for the Plain Clothes and Uniformed Inspections

	Plain Clothes	Uniformed	Total
Invalid Payment	603	224	827
Total Observation	3957	2361	6318
Fare Evasion Rate	15.24%	9.49%	

It is important to note that the fare evasion rates above do not include our observations from off-boarding inspections. Our concerns with the accuracy of the fare evasion results for the off-boarding inspections can be found in section D.3.

Streetcar fare evasion results were higher on the new streetcars at 18.6%

The type of streetcar also significantly affected the fare evasion rate, with the highest rate on the new multi-door model (18.6 per cent), followed by the old streetcar (7.6 per cent), and the occasional buses used on streetcar routes (5.9 per cent), as shown in Table 5. Again, the results are statistically significant.

The new streetcars have four doors and no interaction between operators and passengers

TTC's new streetcars are used on certain routes. The higher evasion rates for the new streetcar model are likely due to its four entry/exit doors with no interaction between the streetcar operator and passengers. Whereas there is still interaction between passengers and operators on the old legacy streetcars and on buses that are currently being used on some streetcar routes. We also noted that the operators of the legacy streetcars and buses sometimes only open the front door for entry, which appears to have a deterrent effect on fare evasion.

Table 5: Fare Evasion Rate by Type of Vehicles on the Streetcar Routes

	New Streetcar	Old Streetcar	Bus	Total
Invalid Payments	609	174	44	827
Total observations	3,272	2,299	747	6,318
Fare Evasion Rate	18.61%	7.57%	5.89%	



Newer Streetcar



Older Legacy Streetcar

Types of Fare Evasion on Streetcars

Table 6 provides a breakdown of the violations by the type of fare evasion.

Table 6: Types of Fare Evasion on Streetcar Routes

Types of Fare Evasion	Number of Incidents
Did not Pay/No Proof-of-Payment ¹	378
Did not tap PRESTO card	260
Invalid Pass (Metropass/Day pass) ²	130
Invalid Transfer/Proof-of-payment ³	43
Vending machine not working and thus did not pay ⁴	14
Invalid PRESTO concession card ⁵	2
Total	827

¹This includes passengers who did not pay such as had a token but did not put in the fare box or vending machine, had a ticket but did not validate, or had no other means of payment.

²This includes passengers who had a Post-Secondary Metropass, but did not have the TTC issued photo ID or had expired TTC issued photo ID (condition of use of Post-Secondary Metropass is that customer must have the TTC issued photo ID), or passengers who had an expired Day Pass.

³This includes passengers who had expired or invalid transfers, or tickets that had been validated multiple times or expired.

⁴When passengers got on the streetcar, they did not make an attempt to pay. When the Inspector approached them for proof-of-payment, they went to the vending machine to pay but the vending machine was broken. We excluded 26 instances where passengers attempted to pay but were unable to as the vending machines were out of service.

⁵This includes passengers who had an invalid concession PRESTO card, such as a student who was older than 12 years old and used a child card.

Most common type of fare evasion - passengers did not pay or did not have proof of payment

The most common type of fare evasion was that the passenger simply did not pay (legacy fare media) or did not have Proof-of-Payment. This type of fare evasion is closely followed by passengers who did not tap their PRESTO card.

Our recommendations regarding improving TTC's Fare Inspection program on streetcars are included in Section D of this report.

However, given the high fare evasion rate on streetcars, fare inspection alone may not be able to effectively address the problem. The high fare evasion rate on streetcars is largely due to passengers' lack of interaction with streetcar operators under the Proof-of-Payment policy, and the multiple door vehicles. To effectively reduce fare evasion on streetcars, TTC needs to explore options beyond fare inspection to help prevent and reduce fare evasion.

Recommendation:

- 5. The Board request the Chief Executive Officer, Toronto Transit Commission, to explore system wide options that can help prevent and reduce fare evasion on streetcars with multiple doors and Proof-of-Payment policy.**

A. 4. Bus Fare Evasion

Bus drivers are trained to educate passengers to pay the proper fare when it appears they may not have. The fare payment box is located at the front of the bus beside the driver, and there is a PRESTO fare card reader at the front and rear doors.

If passengers refuse to pay, bus drivers are not required to enforce fare per TTC policy due to personal safety risk

However, if passengers refuse to pay, drivers are not required to enforce fare payment for safety reasons per TTC policy (2015). There is also a risk that passengers who enter the rear bus door do not pay (on busy routes where both rear and front doors are opened), or that a PRESTO fare card reader is not working and the passenger doesn't tap at the other reader.

Overall Bus Fare Evasion Rate

TTC's fare evasion rate on buses was assessed as 5.1%, similar to 4.9% from TTC's 2016 consultant study

TTC's current fare inspection program does not cover buses. At our request, TTC Fare Inspectors conducted fare inspection on a total of 76 buses on 26 different bus routes. Based on our assessment, the overall fare evasion rate for buses was 5.1 per cent, which is close to the rate found in TTC's 2016 consulting study (4.9 per cent).

Fare evasion ranged from 0% on some bus routes up to 22.2%

The fare evasion rates on bus routes ranged from 0 per cent to 22.2 per cent. Eight of the 26 bus routes had a fare evasion rate greater than the average bus fare evasion rate of 5.1 per cent.

Factors Affecting Fare Evasion Rate

Fare evasion was higher on articulated buses (6.6%) which have three doors, compared to regular buses (4.4%)

The articulated buses operate on six routes. These buses had a higher evasion rate of 6.6 per cent while the regular buses had an evasion rate of 4.4 per cent. Articulated buses contain two sections joined together by a pivoting joint. They are longer with three doors and have more seating capacity compared to regular buses which have only two doors.



Articulated Bus (three doors)



Regular Bus (two doors)

Fare Inspection Challenges for Buses

As TTC expands its inspection program to buses, they should explore ways to enable efficient fare inspection

Unlike streetcars, buses do not require Proof-of-Payment. When passengers board the buses at subway stations, they are not required to obtain any Proof-of-Payment. This prevents TTC's Fare Inspectors from conducting a fare inspection "sweep" of all passengers while on board a bus. It also increases the risk of fare evasion as passengers can enter off the street without paying and without risk of being inspected. As TTC expands its inspection program to buses, it should explore ways to enable more efficient fare inspection on buses.

Current TTC policy requires bus drivers to educate passengers, push the fare dispute key, and the bus continues in service

All buses are equipped with fare dispute keys, which the bus driver is to push when a rider does not pay the appropriate fare, per TTC policy. Prior to Fall 2014, if a rider did not pay their fare and did not leave, bus drivers were required to stop/hold the bus and call/wait for TTC Transit Control to send assistance. However, that was very inconvenient to the other passengers and increased the safety risk to the bus driver. Now, the bus driver is to educate the passenger, push the fare dispute key and the bus continues in service.

More communication and training is needed to ensure all bus operators push the fare dispute key when required

Despite the policy, few bus drivers routinely push the fare dispute key, according to reports reviewed and as advised by TTC staff. It appears that more communication and training is needed to ensure all TTC bus operators are pushing this fare dispute key whenever a rider does not pay the appropriate fare. This information can then be analyzed by TTC to identify high-risk routes in order to strategically allocate inspection resources.

Recommendations:

6. The Board request the Chief Executive Officer, Toronto Transit Commission, to expand its fare inspection program to include buses and develop effective fare inspection methods for buses.
7. The Board request the Chief Executive Officer, Toronto Transit Commission, to ensure that bus operators and streetcar operators are instructed and trained to press the fare dispute key whenever the appropriate fare is not paid. Data from the fare dispute keys should be routinely analyzed and used to aid in the strategic allocation of fare enforcement resources.

A. 5. Subway Fare Evasion

TTC's fare evasion rate on subways was 3.7%

TTC's current fare inspection program does not cover subway stations. At our request, TTC Fare Inspectors conducted a blitz of subway stations during our audit period. We conducted a total of 22 hours of observations at 15 subway stations with TTC Fare Inspectors.

Our subway evasion rate was based on PRESTO usage whereas the 2016 consultant study focused on Metropass and legacy fare media

The fare evasion rate on subways was found to be 3.7 per cent, which is lower than the 2016 consultant study (4.3 per cent). It should be noted that our 3.7 per cent fare evasion rate is likely understated because our audit observations on subways focused on examining PRESTO cards through the TTC fare gates. Our observations could not include fare evasion for legacy fare media because it would be logistically challenging given the high volume of passengers passing through multiple gates at the same time.

TTC's fare gates are designed to ensure passengers safety

Illegal Entries – Subway Automatic Entrances

Illegal entries may be more common at automatic entrances where there is no fare collector or TTC staff present

The design of TTC fare gates ensures that passengers' safety is protected; however, based on our observations, they present easier opportunities to evade fare. The risk of illegal entries may be higher at the automatic subway entrances i.e. entrances that don't have the presence of a fare collector or a subway station supervisor. As of January 2019, the TTC had 56 automatic entrances operating at 42 subway stations.

We reviewed TTC camera security footage for the automatic entrances at the following four subway stations: Victoria Park, Sherbourne, Ossington and Spadina, for one day from 6:00 am to 11:00 am and 9:00 pm to 1:30 am. We observed the following examples of illegal entries:

Examples of illegal entries observed at automatic entrances:

- Tailgating
- Pushing through the gate
- Going through gap in the gate
- Jumping over fence
- Opening the gate for next person from paid area
- Using an object to open the gate

- Tailgating – when a second (and sometimes 3rd and possibly 4th) passenger travels closely behind the person paying and the gates remain open for them to follow and enter without paying
- Pushing through the gate – the wide accessibility fare gate can be pushed open by a passenger when enough pressure is applied
- Going through gap in the gate – the gap in the accessibility fare gate can be squeezed through by some passengers
- Jumping – fences beside the fare gates can be easily jumped over
- Opening the gate for the next person from the paid area – when a passenger pays and remains in the paid area just past the gate, and activates the gate so that the next person can pass through without paying
- Using a bag or other object to open the gate – some passengers have been able to open the gate by using a bag or other object

Steps will be taken by TTC to curb illegal entries

TTC indicated that they will be taking steps to closely monitor and address illegal entries at subway station entrances.

Examples of illegal entries are shown below:



Example of tailgating



Example of pushing the gate open



Example of using an object to open the gate



Examples of jumping the fence beside the gate

218 instances of illegal entries found at four automatic entrances over a total period of 9.5 hours per station

Breakdown of Illegal Entries by Type and Time

We noted in total 218 instances of illegal entries from reviewing four automatic entrances over a period of 9.5 hours at each station. The number of instances varied from 14 to 84 at each of the four stations. Table 7 provides a breakdown of the type of the illegal entries.

Table 7: Types of Illegal Entries

Type of Illegal Entries	Number of Illegal Entries
Tailgating	109
Pushing fare gate/going through the gap	46
Jumping the fence	35
Letting people in from paid area	11
Going through a malfunctioned fare gate without paying	12
Other	5
Total	218

The highest number of instances of illegal entry were in the morning, with the most at 7-8 am

The morning (132 instances) seemed to have more instances of illegal entry compared to the evening (86 instances), with the early morning hours from 7 to 8 am showing the highest instances of illegal entries.

Ways to help reduce illegal entries

While illegal entries may be seen remotely by fare collectors, no immediate action can be taken

While fare collectors in booths have the ability to view live security camera footage of the automatic entrances, they are not allowed to leave their booths without permission per TTC policy, even if they see instances of illegal entry. However, they do have the ability to call for assistance. We were advised this is generally not done, as Transit Enforcement Officers often have higher priority security concerns to address.

Fare gate system data is collected but not ready for analysis after two years of implementation

TTC's system has the capacity to record illegal entry data through the sensors attached to each fare gate. We had initially planned to analyze this set of data to determine the prevalence of illegal entries at all TTC subway stations. However, two years into the implementation of fare gates, staff advised that they are still in the user acceptance testing phase due to the design of the sensors, and the data was not ready for analysis. Staff also need to ensure the completeness and reliability of the data in generating future reports.

Given the higher risk of fare evasion at automatic entrances, TTC should take steps to reduce fare evasion at these entrances

Given the higher risk of fare evasion at automatic entrances, TTC staff should use data analytics to identify stations with a higher risk of illegal entry. For the high-risk automatic entrances, options to consider include:

- evaluating the hours of operation of the automatic entrances
- having TTC staff present at the high-risk entrances during peak hours
- assigning staff to actively monitor a sample of security footage
- setting aside dedicated enforcement resources to help remediate issues in a timely manner, and
- assessing the feasibility of converting fare gates at certain high-risk stations to high physical gates

Recommendations:

8. The Board request the Chief Executive Officer, Toronto Transit Commission, to expand its fare inspection program to include coverage of subway station entrances.
9. The Board request the Chief Executive Officer, Toronto Transit Commission, to take the necessary actions to reduce the number of illegal entries, particularly at automatic subway entrances, including:
 - a. Perform a cost-benefit analysis of continuing to keep the automatic entrances open, whether to install high gates in high-risk entrances at subway stations, and whether to station Toronto Transit Commission staff at some of these entrances;
 - b. Complete work on the fare gate sensors and fare gate event data reporting, so that information can be used to determine the rate of illegal entries at subway stations and to strategically allocate fare inspection resources; and
 - c. Ensure security camera video is monitored on a regular basis.

B. Other Factors Impacting Passenger Fare Revenue

Fare evasion is not the only risk that contributes to lost passenger revenue. Other factors that result in lost passenger revenue for TTC include Metrolinx Single Ride Vending Machines (SRVMs) and PRESTO card readers not working, subway TTC fare gates not working properly and stuck in the open position, and subway crash gates left open during TTC staff breaks.

B. 1. Metrolinx Equipment

Single-Ride Vending Machines supplied by Metrolinx are on newer streetcars

Metrolinx Single-Ride Vending Machines

On TTC's newer streetcars, passengers have several options for payment including paying at the on-board vending machines⁹. The Single-Ride Vending Machine (hereafter refer to as Metrolinx vending machine) is supplied by Metrolinx (see photo below). Some of the busier stops also have curbside Metrolinx fare vending machines installed. The vending machine allows for fare purchase by tokens or coins, and previously also allowed for payment by debit or credit card until the functionality was removed on December 3, 2018 by TTC.

⁹ Another on-board vending machine is supplied by Parkeon and accepts only cash and tokens, however our observations were focussed on the Metrolinx equipment



Following Metrolinx's pilot project, TTC removed the credit/debit card payment capacity to improve the functionality of the vending machines

Under the master agreement with TTC, Metrolinx is responsible for the maintenance and repair of its vending machines. Metrolinx and their subcontractor conducted a three-week pilot project on the vending machines on TTC in November 2018 and determined that removing credit and debit card payment would improve functionality from 84 per cent to 97 per cent. In response, TTC stopped credit/debit card payment functionality on these machines starting December 3, 2018. Subsequently, both TTC and Metrolinx staff advised that the functionality has improved substantially.

Over 80 hours of observation, we noted 40 passengers on 12 streetcars who were not able to pay as the vending machines were not working

The functionality of the Metrolinx vending machines has been an issue. During our 80 hours of streetcar observations (over two weeks) in November 2018 for on-board inspections, we noted 40 passengers on 12 streetcars who were not able to pay because the vending machines were not working. Among the 40 passengers:

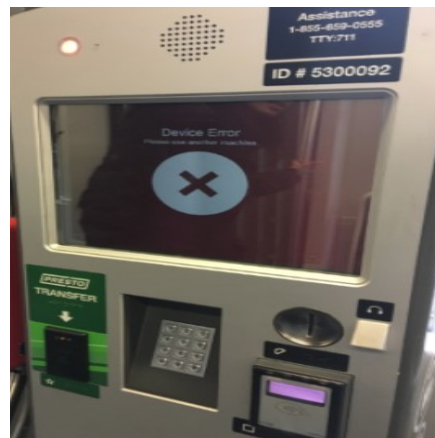
- 26 attempted to pay their fare but were unable to do so because the vending machines were not working. These 26 instances were not included in our fare evasion rate calculation.
- 14 did not attempt to pay until asked by the Transit Fare Inspectors; however, when they went to pay, they found the machines not working.

It should be noted that our observations for on-board and off-boarding inspections were conducted prior to the removal of the debit/credit payment functionality in December, 2018.

During off-boarding inspections we noted 71 instances of passengers complaining about broken vending machines

During off-boarding inspections of streetcars at four stations, among 170 passengers who could not provide the required Proof-of-Payment, 71 complained about broken vending machines. When the Fare Inspectors were not able to re-board the streetcar to validate whether the machines were working or not, the Fare Inspectors accepted the rider's explanation and asked them to pay at the nearby collector booth. They were not able to check whether the passengers made their payment as they needed to carry on with the inspection.

Below is a picture of an out-of-service Metrolinx vending machine that we noted during our audit observation work.



Broken vending machines can be used by some passengers as an excuse for not paying fare

Many of the Fare Inspectors raised concerns about the unreliability of the Metrolinx equipment and that it can also impact fare evasion and their fare inspection. They stated that many regular passengers are aware of the machines always having issues, and some use it to their advantage to evade fare payment. For example, if one passenger either uses it as a valid reason or excuse while on-board the streetcar, others in earshot will often provide the same reason and follow suit if they did not pay their fare, and it would be difficult to prove if they evaded fare or if they had a valid reason for not paying.

PRESTO Card Readers

Metrolinx's PRESTO card readers are used to collect fares from passengers when tapping their PRESTO cards. These card readers are installed at every door of legacy and newer streetcars, buses, and they are also attached to TTC fare gates in subways.

Many PRESTO card readers were observed to be out of service during our audit work

Many PRESTO card readers were out of service during our audit observations in November and December 2018. Although at least one other PRESTO card reader on board was functional the majority of these times, passengers were not always able to reach the other reader due to congestion or did not choose to go to the other reader to tap.

TTC staff advised that bus operators are to report any service issues with PRESTO card readers. However, at times the PRESTO card readers are out for a few minutes and come back in service again, so this may cause hesitation for some bus operators in reporting all card reader issues.



PRESTO card readers functionality should be 99.99%

Metrolinx is also responsible for the maintenance and repair of the PRESTO card readers. Under the agreement between TTC and Metrolinx, there is a target functionality rate of 99.99 per cent for the PRESTO card readers.

TTC has invoiced Metrolinx the amount of estimated revenue loss of \$7.5 million for the three years ending December 31, 2018

Since the implementation of the Metrolinx equipment, TTC has invoiced Metrolinx \$7.5 million for the amount of estimated revenue loss for the three years ending December 31, 2018, as a result of Metrolinx equipment (including Metrolinx vending machines and PRESTO card readers) not working at agreed-upon levels and as allowed under its contractual agreement. Negotiations are ongoing between TTC and Metrolinx.

According to TTC staff, in 2018 \$3.4 million in revenue was lost due to malfunctioning Metrolinx equipment.

TTC projects up to \$6 million in revenue loss for 2019

According to TTC staff's calculation, the projected revenue loss due to Metrolinx equipment failure in 2019 could amount to nearly \$6 million if functionality is not improved.

In the second phase of the audit, we will further examine the functionality levels of Metrolinx equipment. However, given the revenue loss caused by Metrolinx equipment failure, TTC needs to strengthen its actions with Metrolinx to minimize passenger revenue loss.

Recommendation:

10. The Board request the Chief Executive Officer, Toronto Transit Commission, to ensure the contracted service requirements are upheld regarding functionality of Metrolinx Single Ride Vending Machines and PRESTO Card Readers, and recover from Metrolinx lost passenger revenue.

B. 2. TTC Fare Gates and Use of Crash Gates

TTC Fare Gates

TTC replaced turnstile entrances in subway stations and purchased short paddle fare gates

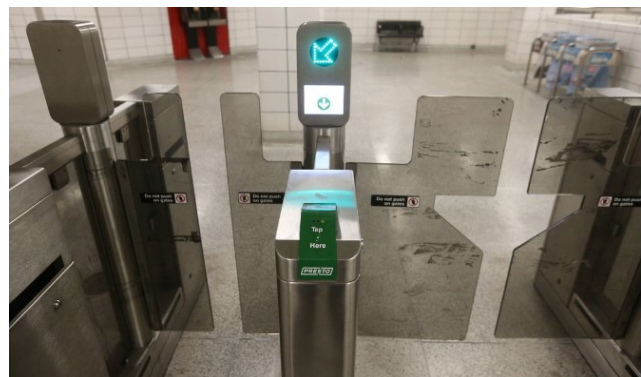
TTC used to have turnstiles and high gates in its subway entrances (see pictures below). In implementing PRESTO cards, TTC decided to replace its turnstiles with the short paddle fare gates, and attached a PRESTO card reader to each fare gate (see pictures below).



Old Turnstile Gates



Old High Gates



New Fare Gates

Given that subway stations are intended to be closed transit systems with passengers paying before gaining entry, it is important that the TTC fare gates are fully functional and that they open and close properly with each customer entry, and that illegal entries are very difficult or impossible.

TTC is accountable for first-line maintenance on the TTC fare gates

Since installation, TTC has been accountable for its own first-line maintenance and repair of the TTC fare gates. Metrolinx would be responsible for any issues in regard to backend servers or software.

We noted over 40 instances of TTC fare gates malfunctioning at 14 of the 15 subway stations we observed

During our audit observation, we noted many instances of malfunctioning TTC fare gates that were stuck in an open position. Among the 15 subway stations we visited, in 14 of them within one to two hours of observation we noted multiple instances of fare gates not operating. In total, we noted over 40 instances of malfunctioning fare gates during 22 hours of subway observations.

In many of these cases, the fare gates would remain open and then 'self-close' shortly after. But at other times, they did not and could stay open for long periods.

According to TTC staff, the fare gates are designed so that if stuck, they will be stuck in an open instead of closed position for safety purposes. Phase 2 of this audit will examine this issue. When TTC fare gates are stuck in an open position, the risk of fare evasion increases, particularly at subway entrances without a TTC fare collector or station supervisor present. Pictures of TTC fare gates stuck in an open position are provided below.



Malfunctioning Fare Gates

Malfunctioning TTC fare gates at automatic entrances may take a long time for repair and therefore allow for passengers to enter without paying

In addition, at an automatic entrance, we noted an accessibility TTC fare gate that was stuck open half way (see picture below). TTC staff advised that when a fare gate fails and is stuck open, there is no automatic message to fare gate maintenance staff to let them know that the gate went out of service. We were also informed that the only way fare gate maintenance staff know that the gates are out of service is if TTC staff notify the maintenance staff by creating a ticket in their maintenance system. Unless TTC station staff regularly check and report on TTC fare gates at automatic entrances, any malfunctioning fare gates at those entrances will be stuck open for potentially a long period of time, allowing passengers to freely pass through the gate.



In the second phase of the audit, we will further examine the functionality of TTC fare gates.

Crash gates

TTC uses crash gates in high volume subway stations to speed up passenger flow

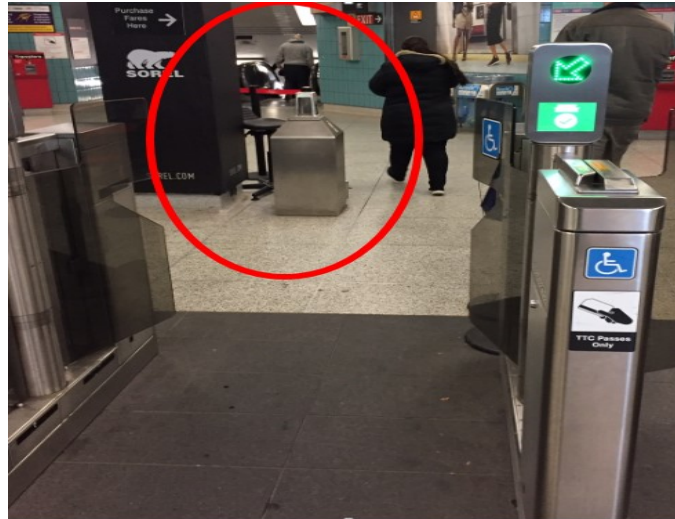
'Crash gates' refer to TTC's practice of leaving the large accessibility fare gate open with a TTC staff member by the fare box to observe fare payment. This practice is done in high-volume subway stations to speed up passenger flow during rush hours. There are currently 14 crash gates at 13 subway stations.

During our audit period, we noted that the crash gates at some stations were left open but unattended by staff and the fare boxes were closed. Passengers were able to go through the open gate without paying their fares (see the photo below).

Crash gate staff cannot close the gate in the event that they need to leave the gate

Based on our discussion with crash gate staff, they are instructed by TTC to lock their fare box during their scheduled 15-minute break, but they are unable to close the crash gate. Only the fare collector in the booth can close the gate using the computer system located inside the booth.

TTC management indicated that crash gates should not be left open and unattended as crash gate staff are covered when on their breaks. While this may be the case, there may be circumstances in which crash gate staff decide to leave the gate outside of their scheduled breaks for various reasons. In the picture below, the crash gate staff member is not in attendance but the crash gate has been left open.



Booth fare collectors should close the gate in absence of crash gate staff

To avoid revenue loss due to unattended crash gates, staff should be instructed to ask the fare collector in the booth to close the gate prior to leaving the crash gate. We were advised by TTC staff that not all fare collectors know how to use the computer system to close the gate, so this may require additional staff training.

Recommendations:

- 11.** The Board request the Chief Executive Officer, Toronto Transit Commission, to review current TTC fare gate functionality issues, and develop and implement short and long-term strategies to improve fare gate functionality to reduce revenue loss.
- 12.** The Board request the Chief Executive Officer, Toronto Transit Commission, to instruct and train crash gate staff on Toronto Transit Commission (TTC) policy, to request the fare collector to close the TTC fare gate when unattended by TTC staff, and to ensure fare collectors are trained in this task.

C. Fraudulent Use of Child PRESTO Cards

On March 1, 2015, TTC adopted the fare policy that children 12 years of age and under ride for free. The policy does not require children to carry any proof-of-age identification or document.

The use of Child PRESTO cards has been encouraged by TTC so that children can independently use the automatic TTC fare gates at subway stations, and for TTC to better track child ridership.

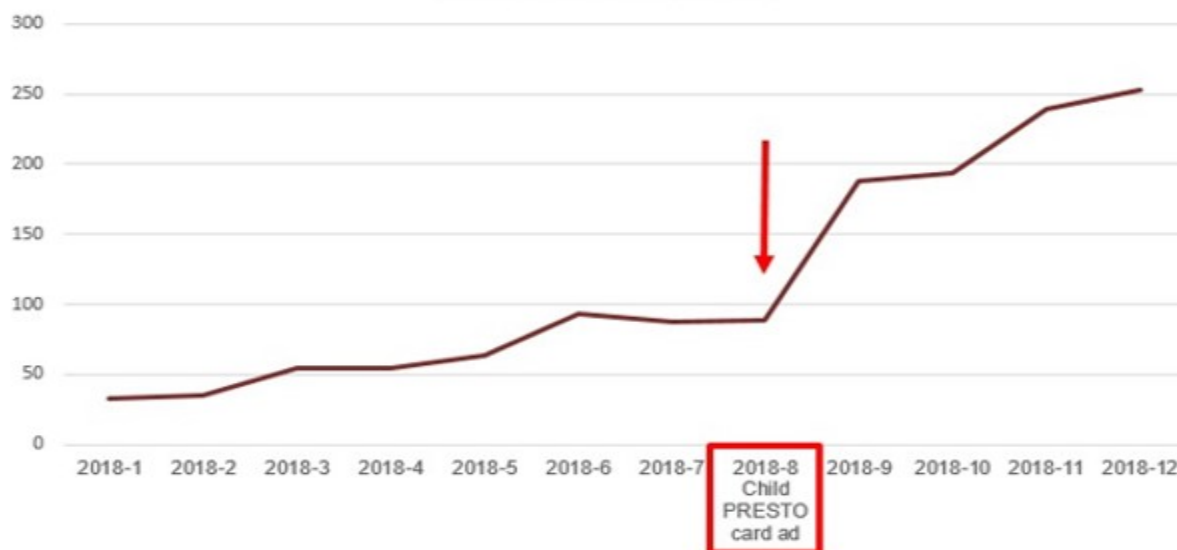
A Child PRESTO card costs \$6 and requires a minimum \$10 load – the same for any PRESTO card. For child use, the card will not carry any balance other than the initial \$10 load and can be used an unlimited number of times on TTC. Distributors and the TTC Customer Service Centre at Davisville station can set the Child fare type on PRESTO cards. Valid government-issued photo identification is needed to set a child concession for the card.

On August 26, 2018, TTC started an advertising campaign for Child PRESTO cards using the advertisement below. TTC plans to provide over 240,000 free Child PRESTO cards in early 2019 to Toronto School Boards, with the manner of distribution left to the School Boards and various schools to determine.



The number of Child PRESTO cards being bought and used on the TTC has increased drastically since the advertisement campaign began, as shown in Figure 4.

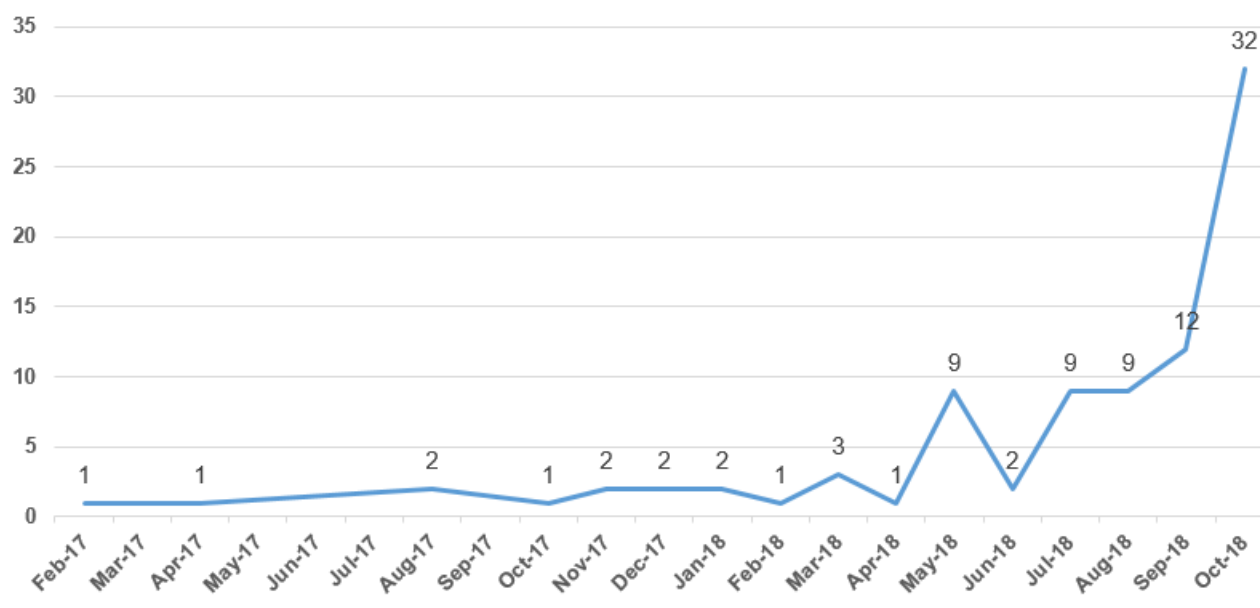
Figure 4: Increase in Child PRESTO Ridership in 2018 after the Advertisement of the Child PRESTO card (ridership numbers are in 000's)



According to TTC staff, 12,584 unique PRESTO cards with child concession were used for 867,238 rides on the TTC from January 1 to October 31, 2018, compared to only 3,962 cards for 162,231 rides for all of 2017.

TTC's Transit Fare Inspectors have found that the number of passengers who fraudulently use Child PRESTO cards has increased since the advertisement campaign. The total related charges and cautions, as displayed in Figure 5, have increased from nine in 2017 to 80 from January 1 to October 31, 2018.

Figure 5: Total Number of Cautions and Charges Issued by TTC Transit Fare Inspectors on the Fraudulent Use of the Child PRESTO Card on TTC, from February 2017 to October 2018



C. 1. Identification of Fraudulent Use of Child PRESTO Cards

As part of our audit, we visited 15 different TTC subway stations with TTC Fare Inspectors during a very short timeframe of one to two hours per station. Based on our on-site observations and analysis of PRESTO data, there appeared to be frequent misuse of Child PRESTO cards by passengers.

56 passengers found to be fraudulently using a Child PRESTO card at subway stations

During our 22 hours of subway observations, when an Inspector checked a passenger's fare payment and found they had used a child concession on a PRESTO card, the passenger had used it fraudulently. In total, TTC Inspectors found 56 passengers who were fraudulently using a Child PRESTO card during our observations.

Passengers who were found fraudulently using Child PRESTO cards included adults, post-secondary students, students, and a senior. We noted at times the passengers were carrying two PRESTO cards – an adult (or other appropriate concession) card that had not been tapped and was presented for inspection to the Transit Fare Inspector, and a Child card that was tapped and was also used at other times.

22 passengers found to be fraudulently using a Child PRESTO card on buses

During our bus observation period in December 2018, Transit Fare Inspectors identified the fraudulent use of Child PRESTO cards by a total of 22 passengers on 17 different TTC buses during a very short timeframe. There were certain routes where the number of incidences were very high.

During our streetcar observations, TTC Inspectors only identified two instances of fraudulent use of the Child PRESTO card. While we cannot be certain, this could be because of the streetcar's Proof-of-Payment system (honour system) where passengers intending to evade fare can easily do so without the trouble of obtaining/using a Child card.

We did not see any children using the Child Presto card over our entire observation period on streetcars, buses and subway stations

It is important to note that during our six weeks of audit observation work on all three modes of transit and covering many different times of the day on TTC, we did not come across ANY children aged 12 and under using the Child PRESTO cards. We saw parents letting their children through the TTC fare gates and children walking onto the bus and streetcar for free, which is fine with the current fare policy.

Likely that a large percentage of the Child PRESTO taps are fraudulent and the annual revenue leak for TTC could be in the millions

This raises a question of whether the reported number of Child PRESTO taps, just over one million rides in 2018, were truly used by children, and what percentage could be passengers fraudulently using the cards. Based on our observation results, it is likely that a large percentage of the Child PRESTO taps are fraudulent and the annual revenue leak for TTC could be in the millions. In addition, given the increasing number of Child PRESTO cards, combined with an increasing adoption rate for PRESTO cards on TTC, the annual revenue loss from fraudulent use of Child cards could rise even further.

Recommend TTC to re-assess the need to issue Child PRESTO cards given the current control weaknesses in its system

To implement the City's child ride for free policy, a Child PRESTO card may not be necessary. In our view, given the significant risk, TTC should re-assess whether there is a critical need to issue Child PRESTO cards. We appreciate TTC's intent to provide easy access for children aged 12 and under, but this needs to be balanced with the risk of significant annual revenue loss. TTC needs to address an array of control weaknesses prior to further promoting the use of the Child PRESTO card.

The child concession is a universal concession, meaning that all transit agencies using PRESTO have the ability to issue child cards, not just TTC. According to Metrolinx, all transit agencies will need to accept a tap from a card with a child concession since it is universal. The corresponding Child fare is subject to each transit agency's fare policy.

Other transit agencies using PRESTO also have Child PRESTO cards but none seem to have reported issues similar to TTC. This is likely because of TTC's fare policy allowing children aged 12 and under to ride for free. The other agencies have a fare policy for children aged five and under to ride for free, so presumably a child would not be travelling independently in the other jurisdictions. Also, the other transit agencies appear to have in place ways for their bus drivers to easily see when a Child PRESTO card is being used. Another major difference is that TTC is the only agency (other than GO Transit) in the GTHA operating a rail system where passengers can enter the system without any interaction with staff.

Our concerns about the Child card were communicated with TTC senior management during audit fieldwork

Numerous and serious control weaknesses with the issuance and ongoing monitoring of PRESTO Child cards were noted early in the audit. The Auditor General communicated our preliminary findings and concerns to senior management staff during the audit fieldwork to make them aware of the issues so they could initiate timely action to address the issues. This resulted in TTC putting a pause on the promotional Child PRESTO cards planned for issuance to Toronto schools.

Recommendations:

- 13. The Board request the Chief Executive Officer, Toronto Transit Commission, to re-assess whether there is a critical need to issue Child PRESTO cards, balancing provision of good customer service with the risk of fraudulent use of the Child Cards.**
- 14. The Board request the Chief Executive Officer, Toronto Transit Commission, to *NOT* distribute the Toronto Transit Commission's promotional Child PRESTO cards until appropriate controls are in place.**

C. 2. Lack of Visual Distinction in PRESTO Cards

A lack of visual difference between the child and other concession and adult PRESTO cards

There is a lack of visual difference between the Child and other concession and Adult PRESTO cards. Below is an image of an adult PRESTO card and a Child PRESTO card – they are exactly the same.



The lack of visual difference makes it impossible for bus and streetcar drivers, fare collectors and Fare Inspectors to spot the inappropriate use of child or other concession PRESTO cards

Other than the special promotional Child PRESTO cards that TTC planned to issue (which is planned to include an embossed sticker on card to show the concession type), there is no visual distinction between the regular Child PRESTO cards (with \$0 fare) and other concession (student, post-secondary student, senior) and Adult PRESTO cards (with regular fare). This makes it impossible for bus drivers, streetcar drivers, fare collectors and Fare Inspectors to spot the inappropriate use of the Child PRESTO cards. It also makes it challenging for passengers to know whether they are carrying another family member's (e.g. child, younger sibling) PRESTO card.

We were informed that TTC staff have attempted to negotiate with Metrolinx to provide visual distinction on the Child PRESTO cards, but this was rejected by Metrolinx citing additional inventory costs, according to TTC staff. Metrolinx staff advised that the card is meant to be used for several years and that they don't want to limit the ability of passengers to have the concession type changed, e.g. student to adult, without purchasing a new card to do so.

Recommendation:

- 15. The Board request the Chief Executive Officer, Toronto Transit Commission, to explore ways to provide a Child PRESTO Card that is visually different from an Adult PRESTO card, including further negotiation with Metrolinx to issue visually different PRESTO cards for adults and children aged 12 and under.**

C. 3. Concession Type Unavailable to Bus and Streetcar Operators

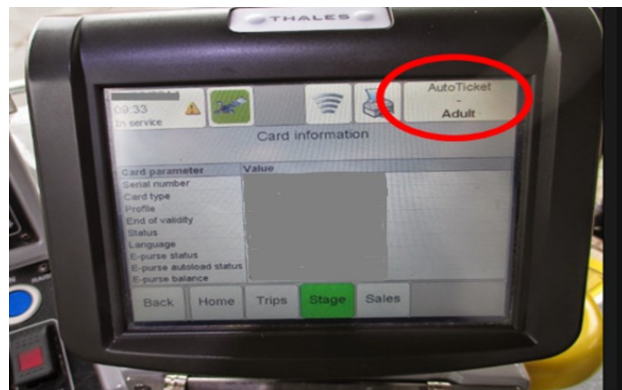
Bus and streetcar drivers are unable to spot the inappropriate use of a child or other concession PRESTO Cards from the PRESTO card reader light/sound

When a Child PRESTO card is used on TTC, it flashes yellow on the PRESTO card readers – the same as with other concession cards such as students and seniors. This makes it impossible for bus and streetcar operators to identify the inappropriate use of the Child cards, as the PRESTO card readers only have one colour (yellow) and sound when any type of concession other than adult is tapped. It would also be more efficient for Fare Inspectors if there were a distinct light and sound for Child PRESTO cards, as they could focus their efforts on catching fraudulent use of these cards, instead of needing to check all concession types with a yellow light.

Other transit agencies using PRESTO have monitoring devices for their bus drivers to see the specific PRESTO concession type

In other transit agencies that use PRESTO, such as York region and Mississauga, their bus operators have a PRESTO tap monitoring device enabling the bus operators to see the specific type of concession being tapped.

The images below shows the PRESTO tap monitoring device used in York region and Mississauga buses.



TTC decided not to have the same monitoring device as other transit agencies using PRESTO that can display specific concession types for bus and streetcar drivers

Without the proper monitoring device in place, TTC bus drivers cannot see whether the PRESTO cards being tapped are adult, student, post-secondary student, senior, or child. According to TTC staff, the lack of this monitoring device was due to a TTC decision in the system chosen for TTC buses and not due to a limitation with PRESTO.

Recommendation:

- 16. The Board request the Chief Executive Officer, Toronto Transit Commission, to make the necessary changes to the Child PRESTO cards so that bus and streetcar operators can spot inappropriate use of PRESTO concession cards including:**
- a. Negotiate with Metrolinx to provide a different light and sound on PRESTO card readers for Child PRESTO cards from other concession types; and**
 - b. Perform cost benefit analysis and consider making change to Toronto Transit Commission revenue vehicles to include display of the PRESTO concession type for bus and streetcar operators.**

C. 4. Control Issues with Issuance of PRESTO Cards

TTC does not know how the issuance of Child PRESTO cards is monitored by Metrolinx or Distributors

At the request of our audit, TTC staff recently obtained documentation from Metrolinx regarding Distributors' processes and requirements for issuing Child PRESTO cards. While Metrolinx had provided training materials to TTC, TTC staff do not know what specific training has been provided to Distributors, or whether Metrolinx or Distributors undertake any ongoing monitoring measures to deter and detect risks of fraud in the sale of Child PRESTO cards.

According to TTC staff, during a fare inspection in 2018, a few York University students alleged they were able to purchase Child PRESTO cards from a Distributor for \$100 each. TTC staff advised that this matter has been referred to Metrolinx for investigation. However, Metrolinx staff indicated that this particular matter was not investigated by Metrolinx, but other matters involving inappropriate use of Child PRESTO cards have been referred to them for investigation.

Card Distributors are not required to maintain a registry database of the Child PRESTO cards

Card Distributors are not required to maintain a registry database of the Child PRESTO cards. Therefore, a person could obtain multiple Child PRESTO cards under the same child's name from the same Distributor on different occasions or from different Distributor outlets.

Our staff were not required to have valid government ID for their child when purchasing a Child PRESTO card

Our staff have attempted to purchase Child PRESTO cards from a Distributor and they were not required to have their child with them or to provide a birth certificate or passport for the child.

If expiry (birth) dates are not set up properly, the risk with the fraudulent use of Child PRESTO cards increases

Metrolinx staff advised that there is an expiry date on the concession type and that it's based on the customer's birthdate entered by Distributor staff and the fare policy (e.g. student card to revert to adult card on the last day of the month in which the student turns 20). However, we noted fare evasion where passengers who were older than 19 were inappropriately using student PRESTO cards and they had not been automatically reverted to adult PRESTO cards. Therefore there may be an issue with the set-up of the expiry dates for the concession cards. This is particularly concerning if Child PRESTO cards are being used fraudulently and may not have an expiry date.

Recommendation:

- 17. The Board request the Chief Executive Officer, Toronto Transit Commission, to ensure adequate controls are in place and consistently applied in the issuance of Child PRESTO cards by Distributors.**

C. 5. Uncertainty with Deactivation of Cards Caught and Payment of Tickets

There is a lack of confirmation that Child PRESTO cards used fraudulently have been deactivated, and that violation tickets have been paid by passengers.

TTC does not have the authority to seize the Child PRESTO card used fraudulently as it is the property of Metrolinx

When a TTC Fare Inspector identifies a passenger fraudulently using a Child PRESTO card, the Fare Inspector can issue a ticket of \$235 on the spot. However, a TTC Fare Inspector does not have the authority to seize the Child card used fraudulently, as TTC would normally do with a fraudulent TTC Metropass, since the PRESTO card is the property of Metrolinx. The TTC Fare Inspector is to email TTC management for the card to be blocked. TTC staff then request on the PRESTO website for Metrolinx to deactivate the card. However, TTC does not receive a report from Metrolinx confirming the card has been deactivated and it is possible the individual may still be using the Child PRESTO card fraudulently.

Although TTC Fare Inspectors can issue tickets for the fraudulent use of Child PRESTO cards, TTC has yet to see whether the ticketing process is effective in court. Court dates are generally four to five months after the issuance of a ticket, so TTC should begin seeing the results soon.

TTC has yet to see whether the tickets issued for fraudulent use of Child PRESTO cards will be upheld in court

Given the lack of visual distinction of the PRESTO concession cards, it is possible that passengers could make an honest mistake by inadvertently taking or using their child's card. It remains to be seen whether judges will enforce payment of the tickets in court.

Recommendation:

18. The Board request the Chief Executive Officer, Toronto Transit Commission, to find ways with Metrolinx to either seize or obtain confirmation of deactivation for Child PRESTO cards found to be fraudulently used.

C. 6. Sale of Child PRESTO Cards on the Internet

Child PRESTO cards are for sale on the internet

During the early stage of our audit field work, we identified ads on the internet selling Child PRESTO cards and provided the information to TTC senior management staff.




Some of the advertisements quoted were:

"TTC yearly unlimited tapping PRESTO \$150.00"

"Yearly unlimited TTC PRESTO card \$200.00"

"UNLIMITED PRESTO CARD (Pay nothing on the TTC for a Year!!!!) \$130.00"

Examples of some ads are in the picture below.

	Presto Unlimited Card (Unregistered) City of Toronto < 4 hours ago I have for sale Presto Unlimited Card (Unregistered) up to 4 years of to use.	\$100.00
	*Unlimited TTC Cards* City of Toronto < 6 hours ago Multiple presto cards available \$180 for each card you purchase. Cards are valid to use for 4 years. Price is negotiable if you purchase multiple. Cards will be tested if meet up comes through	\$180.00
	Presto Card Unlimitted Card City of Toronto < 13 hours ago Presto Card Unlimitted Card feel free to message me on kijiji or text my cell number Price is negotiable. The cards are good for 4 years	\$120.00

The sale of Child PRESTO cards is not a criminal offence; using it inappropriately can result in a fine

Subsequent to informing TTC of the sale of Child PRESTO cards on the internet, we followed up with TTC's Special Investigations Unit and were advised that it is not considered a criminal offence to sell the Child PRESTO cards. TTC can only take action when a person is caught inappropriately using a Child PRESTO card.

TTC's Internal Audit staff has requested for 48 ads to be removed since September 2018 to middle of January 2019

After we had alerted TTC senior management staff of the ads selling TTC Child PRESTO cards, TTC Internal Audit started a process in September 2018 to help reduce these internet ads. An Internal Audit staff member proactively tracks and reports any of these ads to be removed on a regular basis. From September 2018 to middle of January 2019, 48 ads have been reported and removed. Unfortunately, these websites don't allow for repeat evaders to be blocked and the ads need to be removed each time. Our staff have also continued to track these ads, and similar ads continue to be posted after they are removed.

High risk of fraudulent use and serious control weaknesses with Child PRESTO cards on TTC

We found a large number of fraudulently used Child PRESTO cards during our observation period and there are numerous serious control weaknesses. In our view, the Child PRESTO cards should be temporarily suspended until appropriate controls are put in place by the TTC.

Recommendation:

- 19. The Board request the Chief Executive Officer, Toronto Transit Commission, to work with Metrolinx to determine the feasibility of temporarily suspending the Child PRESTO cards on the Toronto Transit Commission until appropriate controls are in place.**

D. TTC Fare Inspection Program

TTC began its fare inspection program in August 2014 and currently has 68 approved positions for Transit Fare Inspectors to help mitigate the risk of fare evasion and revenue loss. TTC's fare inspection is currently focused solely on streetcars (241 vehicles, 7.4 per cent of total fleet). Fare Inspectors conduct the inspections either on board a streetcar or as passengers disembark from streetcars at seven subway stations (off-boarding inspections).

TTC had 46 Transit Enforcement Officers as of the end of December 2018. Transit Enforcement Officers also have the ability to enforce fare payment under TTC By-Law No.1, but it is not considered their main role as they have other duties as special constables, such as the protection of customer and employee safety. There has been some targeted fare inspection activity done by Transit Enforcement Officers on buses.

D. 1. Need for Re-assessing Inspectors' Authority Level and Personal Safety Risk

Key expected roles of Fare Inspectors:

- customer service excellence, and
- safe enforcement of the By-law No. 1

Fare Inspectors Lack Authority in Fare Enforcement

TTC defines the objective of its Transit Fare Inspectors as follows:

*"to provide **customer service excellence while safely enforcing TTC By-law No. 1** on all Proof-of-Payment lines and to reduce overall fare evasion through visual deterrence as well as the issuance of infraction notices."*

Fare Inspectors are not authorized as special constables despite their enforcement duties

Transit Fare Inspectors are trained and expected to perform a range of duties, including customer service, public education, fare inspections/enforcement, and non-physical intervention. Although Fare Inspectors are responsible for enforcing fare payment and inspection, they are not authorized as special constables.

Transit Enforcement Officers have the power to arrest, if needed

TTC's Transit Enforcement Officers are special constables who have similar authority as police officers, and have the authority to enforce certain sections of the Criminal Code. Transit Enforcement Officers have the authority to arrest, if needed. Their uniform includes defensive tools – handcuffs, pepper spray and a baton.

A comparison of the key roles and authority between Fare Inspectors and Enforcement Officers is provided in Table 8.

Table 8: Comparison of the Key Roles and Authority between the Transit Fare Inspectors and Transit Enforcement Officers

	Transit Fare Inspector	Transit Enforcement Officer
Roles	<ul style="list-style-type: none"> • Enforce fare payment under TTC By-Law No.1 • Provide customer service excellence and public education • Perform fare inspections • Non-physical intervention if needed • Reduce overall fare evasion through visual deterrence and the issuance of infraction notices • Record and report fare inspection results 	<ul style="list-style-type: none"> • Protection of the safety and security of TTC patrons and employees • Incident/emergency response • Order maintenance • Crime prevention and law enforcement • Protect TTC's assets • Special event details – crowd control • Enforce fare payment under TTC By-Law No.1
Authority	<ul style="list-style-type: none"> • Provincial Offences Officer • Can issue Provincial Offence Tickets and summonses • Can request ID from customers • Trained to de-escalate and disengage if customer does not cooperate or becomes aggressive • Uniform does not include defensive tools other than a protective vest 	<ul style="list-style-type: none"> • Special Constable, (similar powers to police officer), who has been appointed by a Police Services Board • Authority to enforce certain sections of the Criminal Code • Authority to arrest if necessary • Uniform includes handcuffs, pepper spray and baton

Passengers who refused to cooperate or were aggressive could easily walk away from the Fare Inspectors

During our audit period, we observed that if passengers had not paid the appropriate fare, Fare Inspectors used their judgement on whether to issue a ticket, written warning, or verbal warning. When passengers cooperated by providing their identification and contact information they received a ticket. When passengers just walked away or were aggressive, they did not receive a ticket. There is no repercussion - we saw many evaders simply walk away when asked for proof of payment.

Many passengers appeared to know that if they walked away from a Fare Inspector, there was nothing the Fare Inspector could do about it. In one instance, we observed that a passenger became aggressive and the Inspector de-escalated appropriately, but could not issue the ticket, even though it was obvious that the passenger evaded fare.

This raises the question of whether TTC's fare enforcement is fair and effective.

Transit Enforcement Officers have a higher level of authority that helps make fare enforcement more effective

During some of our audit observations, we requested the presence of both Transit Fare Inspectors and Transit Enforcement Officers. When the special constables were not present, the Fare Inspectors did not always receive the same level of respect and many times it was more challenging to receive cooperation from passengers to show their identification. There were also more passengers who walked away from being inspected when Transit Enforcement Officers were not present.

The presence of Transit Enforcement Officers helps to minimize the number of walkaways and address the safety risk. This would be particularly important when TTC expands its inspection program to subways and buses, where the safety risk can sometimes be higher, based on our observations.

The benefits from having more Transit Enforcement Officers may outweigh the higher salary cost

Transit Enforcement Officers have a higher salary rate compared to Transit Fare Inspectors. As of December 31, 2018, the pay rate for a newly hired Transit Enforcement Officer was \$35.48/hour, compared to \$28.07/hour for a newly hired Fare Inspector. Although there is a higher cost in using Transit Enforcement Officers for fare enforcement, it is possible that the benefits outlined above may outweigh the cost. TTC should conduct a cost-benefit analysis to determine an optimal mix of Transit Fare Inspectors vs. Transit Enforcement Officers in achieving an effective fare inspection program.

Personal Safety Risk for Transit Fare Inspectors

Fare Inspectors do not carry any defensive tools except a protective vest

Unlike Transit Enforcement Officers, Transit Fare Inspector's uniform does not include defensive tools such as handcuffs, pepper spray, or a baton. With a protective vest as their only defensive tool and limited authority, they must approach passengers in close physical proximity and ask for their proof of fare payment.

14 reported cases of assault against Fare Inspectors in 2018

Fare Inspectors may encounter passengers who become very upset and aggressive towards them, particularly when the person realizes they may be receiving a \$235 ticket. In 2018, there were 14 reported cases of assault against Fare Inspectors on duty, according to TTC's records.

Fare Inspectors are trained to de-escalate situations where a passenger becomes aggressive

Fare Inspectors are trained to de-escalate situations where a passenger becomes aggressive. During our audit period, we observed the majority of Fare Inspectors to be effective in de-escalating these situations and/or to avoid the situation altogether.

During our audit we witnessed firsthand where the safety of Fare Inspectors were threatened, including an assault on a Fare Inspector

During our audit observation work, we witnessed first-hand a Fare Inspector being threatened and assaulted by a passenger when asked about his fare payment. The passenger refused to pay or co-operate, kicking the vehicle violently upon exit. In another instance, a passenger boarded a streetcar with a bike and when asked for proof of payment he refused and started to aggressively swing his bike around, before exiting the streetcar and throwing his bike outside of it. Although the Fare Inspectors used their training and de-escalated both of these situations, the personal safety of the Inspectors were threatened and in one case the Inspector was assaulted.

5 complaints about Fare Inspectors' use of force in 2018

On the other hand, there have also been incidents when Fare Inspectors were alleged to have used excessive force with passengers. TTC received five complaints about Fare Inspectors use of force in 2018.

Recommendations:

- 20. The Board request the Chief Executive Officer, Toronto Transit Commission, to conduct a cost-benefit analysis of Transit Fare Inspectors vs. Transit Enforcement Officers with a view to improving the effectiveness and efficiency of the fare inspection program.**
- 21. The Board request the Chief Executive Officer, Toronto Transit Commission, to review the level of authority, tools and uniform provided to Transit Fare Inspectors to ensure they can carry out their duties in a safe and effective manner.**

D. 2. Problematic PRESTO Hand-held Devices in Fare Inspections

The only way for Fare Inspectors to inspect a PRESTO card payment is with the PRESTO hand-held device, maintained by Metrolinx

Fare Inspectors use a PRESTO hand-held device to inspect fare payments made with PRESTO cards. The hand-held device is used to check the concession type (e.g. student, senior, or child) and the transaction history for the last 10 transactions on the PRESTO card. The only way for Fare Inspectors to inspect a PRESTO card payment is with these hand-held devices, which are supplied and maintained by Metrolinx.

Both the speed and the reliability of this device is important for Fare Inspectors to be able to do their jobs effectively and efficiently. This tool has become even more critical as the rate of adoption of PRESTO continues to increase significantly on TTC.

Compared to Metrolinx's devices used for its GO Transit, the speed of TTC's PRESTO hand-held devices is much slower

During our audit, we noted that the speed of the devices was very slow and many Fare Inspectors commented on their frustration with the slow speed. Compared to Metrolinx's devices which perform at 40+ inspections per minute for GO Transit inspections, the devices used by TTC are much slower at about 15-20 inspections per minute.

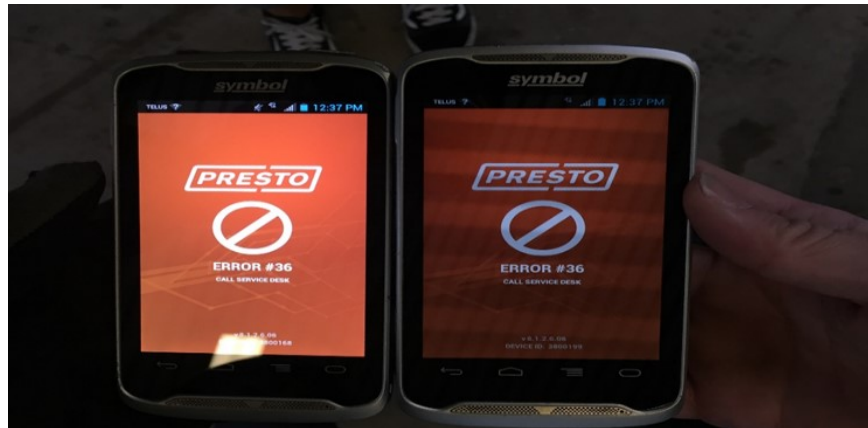
Differences in device performance can be impacted by various factors, including software version and device type. For example, Metrolinx and York Transit use older first-generation devices that have built-in antennae which could contribute to the faster speed. TTC, on the other hand, is using the newer generation devices which are less bulky and have better graphics, but do not have nearly the same level of speed.

Several times during our observations, an Inspector's PRESTO hand-held device crashed and sometimes did not re-start again

We also observed that TTC's hand-held devices were frequently out of service. Several times during our observations, a Fare Inspector's device would crash. Sometimes the Fare Inspectors simply needed to re-boot the device, but often the device did not re-start and the Fare Inspectors had to call the supervisor to deliver a replacement unit, or return to the reporting location to obtain another device. This could cause significant interruptions to fare inspection and lower the efficiency.

There was also one day during our audit that ALL of TTC's PRESTO hand-held devices crashed, but all Inspectors were still expected to carry on and perform their inspections that day. The photo below shows two malfunctioning PRESTO hand-held devices during our observations with Fare Inspectors on that day.

Photo of two malfunctioned PRESTO hand-held devices during fare inspections



No log to track the number and turnaround time for Metrolinx's repair of the broken devices

When PRESTO hand-held devices require repair or maintenance, TTC sends them back to Metrolinx. TTC currently has no log or system to track the number and turnaround time of the broken machines. TTC should be keeping a log documenting the functionality issues with these devices and turnaround time, to ensure they are repaired on a timely basis.

TTC's master agreement with Metrolinx includes basic functions of the PRESTO hand-held device such as:

- PRESTO to ensure that all PRESTO hand-held devices meet all applicable performance specifications as defined and detailed in Service Level Agreement (SLA) Specifications.
- Switching on the PRESTO hand-held device should take no more than twenty (20) seconds to be fully functional and ready to accept customer taps.
- The PRESTO hand-held device be capable of at least 5,000 tap transactions per shift. However, the agreement does not define the length of a shift.

The Service Level Agreement between TTC and Metrolinx has not been finalized by the end of 2018, 6 years after the initial Master agreement was signed

The Service Level Agreement between TTC and Metrolinx had still not been finalized by the end of 2018, six years after the initial Master agreement was signed. No formal written performance standards on the PRESTO hand-held device have been developed and agreed upon.

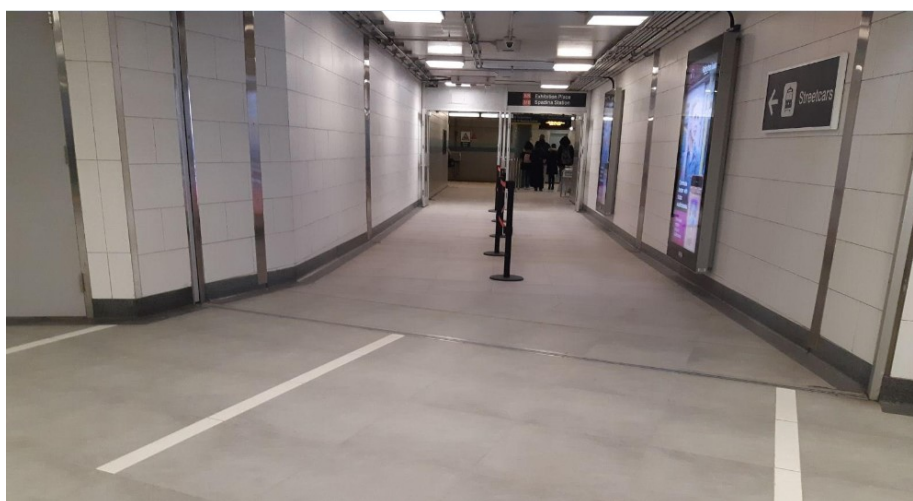
Recommendation:

- 22. The Board request the Chief Executive Officer, Toronto Transit Commission, to take steps to improve the speed, reliability, and functionality of PRESTO hand-held devices for fare inspections. Such steps should include, but not be limited to:**
- a. Improving tracking and reporting of the functionality and repairs of the hand-held devices;**
 - b. Finalizing the Service Level Agreement with Metrolinx, which should specify a level of speed and functionality for the hand-held devices that meets Toronto Transit Commission's business requirements; and**
 - c. Holding Metrolinx accountable for its contracted service requirements on the speed, reliability and functionality of the hand-held devices supplied to the Toronto Transit Commission.**

D. 3. Need for More Effective Off-boarding Inspections

Off-boarding inspections are done by Fare Inspectors in seven subway stations, as passengers exit the streetcar and enter a subway station

Transit Fare Inspectors conduct fare inspection on board streetcars, and off-boarding inspections in seven subway stations. Off-boarding inspections are done as passengers exit the streetcar and enter a subway station. Fare Inspectors can choose between conducting off-boarding or on-boarding inspections when assigned a route. All off-boarding physical layouts are unique due to different subway station designs. The picture below shows the off-boarding location at Union station.



Off-boarding inspections can be an efficient method to inspect a high volume of passengers

Off-boarding inspections can be an efficient method to inspect a high volume of passengers because there is no time spent waiting to board a streetcar or waiting for a streetcar that is not too congested for Fare Inspectors to board.

The lack of physical barriers makes it easy for passengers to walk away and not be inspected

Although the method of off-boarding inspection offers advantages, the way that TTC conducts these inspections needs improvement. A number of stations have no physical barriers for the off-boarding inspections. This makes it easy for passengers to walk away and not be inspected. Generally those that have not paid their fare would be the most likely to walk away from a fare inspection, so it's important to be inspecting all passengers and to minimize walkaways. Also, we observed many passengers were tapping their PRESTO card as they exited the streetcar once they saw the Inspectors.

Passengers who did not pay could easily exit from one of the far doors, bypassing the fare inspection

In particular, when passengers exit the newer streetcars, all four doors open at once. As each fare inspection usually consisted of two Fare Inspectors, the furthest two doors were not stationed by the Fare Inspectors. Passengers who did not pay their fare and wanted to avoid inspection could easily exit from one of the far two doors, bypassing the inspection. At most stations nothing physically prevents them from entering the subway station and avoiding inspection.

Recommendation:

- 23. The Board request the Chief Executive Officer, Toronto Transit Commission, to improve the effectiveness of the off-boarding inspection process to minimize the number of passengers walking away from fare inspection, including measures such as installation of temporary or permanent physical barriers where feasible, and assigning a sufficient number of Transit Fare Inspectors and Transit Enforcement Officers for the off-boarding inspection.**

D. 4. Database for Previous Fare Evaders Not Available During Inspections

Important for Fare Inspectors to know if they are addressing a first-time or repeat evader

When Inspectors are conducting their fare inspections, it is important for them to know if they are addressing a rider who is a first-time or repeat fare evader. The fine amount of the ticket can be higher if the person is a repeat evaders. It may also alert the Inspectors if the rider is potentially more likely to walk away, or may potentially present a higher threat to their own personal safety.

TTC's database of previous evaders is not accessible to Fare Inspectors during inspections

TTC has a database of all previous evaders, but this is not accessible to Fare Inspectors during their fare inspections. Unlike TTC, Metrolinx Inspectors have a mobile application that allows them to access their database of previous evaders.

According to TTC management, they are working to provide an isolated dispatch line available for Fare Inspectors to call in and check with Transit Control on potential repeat evaders in the near future. TTC may want to explore more efficient solutions such as a mobile application used by Metrolinx for checking previous evaders.

Recommendation:

- 24. The Board request the Chief Executive Officer, Toronto Transit Commission, to provide Transit Fare Inspectors with efficient access to the previous fare evader database during inspections.**

D. 5. Improving Resource Allocation and Scheduling

In general more fare inspection teams were deployed to the higher ridership routes

Scheduling Streetcar Route and Timing Coverage

We found that in general more fare inspection teams were deployed to the higher ridership streetcar routes, which would suggest reasonable scheduling of route coverage by supervisors.

Supervisors not provided with tools or reports of previous routes covered for scheduling

However, we noted a few areas that may help to improve the effectiveness of scheduling and route coverage:

Scheduling process and strategic goals are not in writing

- Supervisors are not provided with tools or reports of previous routes covered. This information may assist the supervisors in determining which routes require coverage for that period.
- The scheduling process and goals to be achieved through the scheduling are not in writing. Given the individual performing the scheduling may vary from day to day, it is important to ensure the strategic goals of the scheduling are clearly articulated so they can be consistently achieved.

Lack of Inspector coverage for two highest ridership routes during peak hours

- Two of the highest ridership routes had very little coverage at times of the day when ridership is expected to be high. Staff advised that this was due to lack of staff available during this period.

Instances of multiple teams being assigned to the same routes for the same time period

- Due to multiple starting times and heavier coverage on certain routes, there were sometimes up to three teams of Fare Inspectors on the same route. When this happened, we noted that Fare Inspectors did not always clearly communicate about how to divide the route. There appeared to be limited communication and direction from the TFI supervisors in this regard, which can cause unnecessary duplication on some routes.

Fare Inspectors in plain clothes can more accurately assess the fare evasion rate

Scheduling - Plain Clothes vs Uniformed Inspections

During our audit we noted that the fare evasion rate was significantly higher when Fare Inspectors were in plain clothes (15.2 per cent) compared to those in uniform (9.5 per cent). The higher rate suggests that some riders may only evade fare payment if they think that Fare Inspectors are not on that streetcar.

We recommend the use of plain clothes at times, as it appears to be a more effective means of assessing the fare evasion rate.

Shift Times

Shifts are for 12 hours, with the exception of Sundays, which are eight hours. We noted two opportunities in improving the efficiency of shift time coverages:

The need for overnight inspection shift should be reassessed

The ridership level during the overnight shift is very low. The subway is shut down during this time and the streetcar service is infrequent. Given the long wait time for streetcars and low ridership, the inspection activity of Fare Inspectors is much lower during this time period. In addition, Fare Inspectors on this shift may face an increase in safety risk, making it difficult for them to carry out effective fare inspection. TTC may want to reassess whether there is a need to deploy Inspectors for the overnight shift.

Sunday ridership is lower than weekday ridership, but the number of fare inspection teams deployed is similar to weekdays. Sunday deployments are eight hours long but Fare Inspectors are still given two routes to cover. Given the time spent on travel and administrative duties, the actual inspection time per route is short. It may be more efficient to reduce the routes from two to one during the Sunday shift to increase the actual inspection time.

Recommendation:

- 25. The Board request the Chief Executive Officer, Toronto Transit Commission, to improve the effectiveness and consistency of the scheduling practices of its fare inspection program to:**
 - a. Ensure the route and timing coverage is risk-based and strategic; and**
 - b. Increase the use of plain clothed Transit Fare Inspectors as it enables a more accurate assessment of fare evasion rates and a more effective inspection program.**

D. 6. Increasing the Actual Fare Inspection Time

We noted that a considerable amount of time was not spent on actual fare inspection. We identified several opportunities that can help increase Fare Inspectors' actual inspection time:

Automate the manual ticketing process and recording and reporting of fare inspection results

Based on records from TTC, in 2017 Fare Inspectors issued 11,506 tickets with court imposed fine totalling \$2.24 million. Out of the 11,506 tickets, 6,958 (60.5 per cent) were paid, with the total fine amount of \$1.1 million (49.1 per cent) collected. This is an average of \$158 in fines collected per case. The fines collected go to the City of Toronto instead of the TTC.

It takes Fare Inspectors about 20-30 minutes to issue a ticket, including time for customer education

We noted that a considerable amount of a Fare Inspector's time was spent on writing tickets and warnings, as well as documenting their notes in the office. It usually takes 20-30 minutes to issue a ticket. Part of this time is spent on educating the passengers on fare payment, answering questions specific to their situation, and explaining the appeal process.

An estimated 40% of shift time is used for ticketing, documentation and travel

Out of a 12-hour shift, we found that about 4.5 to 5.5 hours (38-46 per cent) of Fare Inspectors' time is spent on tasks such as issuing tickets, inputting inspection results in the office, and travelling.

It is understandable that Fare Inspectors need to ensure there is sufficient documentation for each incident and ticket because the tickets are frequently contested in court and a high level of documentation and evidence is required. However, TTC should explore ways to automate its manual processes to increase the operational inspection time. For instance, Metrolinx has an automated process for issuing tickets, and Inspectors can print the tickets from their phone.

Manually intensive and inefficient process to report on inspection results is prone to human error

In addition to the time spent ticketing, Fare Inspectors need to enter their fare inspection results on their manual inspection form and enter their results into a database at the end of their shift. Another TTC staff member then takes the information from this database and prepares excel spreadsheets to track and report on the fare inspection results of the program. This manual process is labour-intensive and prone to human error. As a result, we noted many inaccuracies in the inspection records. TTC management advised that they plan to implement a new IT system in the first half of 2019 to address this issue.

Improve the efficiency of the ticket appeal process

Part of the Fare Inspectors' time is for provincial court attendance for tickets and summons being contested.

Establish an internal appeal process to improve efficiency

Under the Metrolinx Act, Metrolinx has an internal alternative dispute resolution program (for specific Metrolinx By-law offences). According to Metrolinx, this allows for improved efficiency, better customer service, shorter timelines, minimal evidence required from officers (in hearings) and additional revenue for the agency.

Significant travel time is often required due to distance between reporting and lunch locations and inspection routes

Under the City of Toronto Act, the City has established an internal appeal process for parking tickets. TTC may want to explore the feasibility of establishing an internal appeal process for fare evasion tickets to improve efficiency.

Reduce travelling time and improve face-to-face communication

We also noted that Fare Inspectors spent a considerable amount of their shift time on travelling between their reporting location, assigned routes of inspection, and lunch location. During each 12-hour shift, we observed that generally at least one hour or more is spent on travelling. This is because:

- Fare Inspectors report from one of three TTC reporting locations, but their assigned inspection routes are not necessarily close to their reporting locations. Fare Inspectors must begin and end their shifts at their reporting location.
- Fare Inspectors have an assigned lunch location, and depending on the location of their reporting office, the travel time immediately before and after lunch can be significant. If Fare Inspectors travel on a streetcar before or after their lunch break, they are expected to carry out inspection duties on the streetcar, even if it's not their assigned route, but otherwise they are not expected to inspect buses or subway during travel time.

The amount of time Fare Inspectors spend travelling may be reduced if there are more satellite lunch locations spread across the TTC network. This may be more important as TTC is expanding its fare inspection program to buses and subways. Going forward, it would be more efficient to assign Fare Inspectors to inspection routes that are closer to their reporting location wherever possible.

Recommendation:

- 26. The Board request the Chief Executive Officer, Toronto Transit Commission, to explore ways to increase actual inspection time by Transit Fare Inspectors including:**
- a. Automating the manual ticketing process and the recording and reporting of fare inspection results;**
 - b. Assessing the feasibility of establishing an internal fare evasion ticket appeal process, similar to Metrolinx (GO Transit); and**
 - c. Exploring ways to reduce travel time by Transit Fare Inspectors between their reporting and lunch locations and assigned routes.**

D. 7. TTC By-law and Fare Inspection Policies and Procedures

TTC By-law No. 1 was approved in 2009. Under this By-law, Fare Inspectors are able to issue Provincial Offences Tickets and summons as per their role as Provincial Offences Officers.

TTC's By-law No. 1 is outdated and has wording that can be confusing to readers

TTC's By-law No. 1 is outdated and has wording that can be confusing to readers. The By-law is currently in the process of being updated and will include information about the PRESTO card.

TTC's Transit Fare Inspection Policies and Procedures manual was developed in May 2018 and approved in July 2018.

Procedures manual can be improved

Although the manual has recently been developed, the procedures do not provide detailed guidance on inspection activities. In addition, the PRESTO card and related processes are not included in the manual.

TTC's fare inspection policies and procedures manual need to contain more details to facilitate consistent fare inspections

The manual can be further improved by providing detailed and clear information on a number of areas. For instance, the manual lacks details on:

- the definition of a walk away and when to record it,
- better guidance on when a ticket vs. a warning should be issued to ensure consistency,
- the process when a concession PRESTO card appears to have been used inappropriately.

Recommendation:

- 27. The Board request the Chief Executive Officer, Toronto Transit Commission, to finalize updating the TTC By-law No. 1 and enhance the Fare Inspection Policies and Procedures manual to ensure they are up to date and include sufficient details to facilitate consistent fare inspections.**

Conclusion

This Phase 1 report presents the results of our review of TTC's Revenue Operations, specifically fare evasion and fare inspection.

Overall 5.4% fare evasion rate

Based on our observations, we estimated that TTC's overall fare evasion rate is 5.4 per cent for all three modes of transit. Streetcars have the highest fare evasion rate at 15.2 per cent, followed by buses at 5.1 per cent, and subway at 3.7 per cent.

Estimated at least \$64 million in annual revenue loss

TTC's annual revenue loss due to fare evasion and other related factors is estimated to be at least \$64 million. The implementation of the 27 recommendations contained in this report will contribute to decreasing fare evasion rates and increasing passenger revenue.

Balance good customer service with controls over fare evasion

Fare evasion is a challenge faced by every transit agency, and a certain level of fare evasion is unavoidable. In recent years, a number of key operational decisions and policy changes have been made by TTC to improve customer service. Improving customer service is very important and should be continued. However, some of the key decisions and changes have also increased the risk of fare evasion. It is equally important to ensure that appropriate controls are in place, including those that reduce fare evasion and its resulting revenue loss.

Audit Objectives, Scope and Methodology

The Auditor General's 2018 Audit Work Plan, received by City Council on December 5, 2017, included a review of the efficiency and effectiveness of Toronto Transit Commission's (TTC's) Revenue Operations.

This audit was also included in the Auditor General's revised 2017 Audit Work Plan, received by City Council on June 27, 2017, but delayed at the request of TTC due to the significant Toronto-York Spadina Subway Extension (TYSSE) project to Vaughan, consuming much of TTC's executive and staff time.

We took a phased approach to the TTC Revenue Operations audit and have planned at least two audit phases, given there are multiple areas and risks within revenue operations.

The second phase(s) may include the following areas:

- Revenue controls including completeness of PRESTO revenue data received from Metrolinx
- TTC's contract management of its contract with Metrolinx, including provision for PRESTO farecard equipment

The objectives of this **Phase One** review were to assess the effectiveness and efficiency of TTC's controls intended to minimize revenue loss from fare evasion risks, including its fare inspection program.

This audit covered the period from January 1, 2016 to December 31, 2018, except in multi-year trend analyses.

We used a lens of revenue loss (impact), with a focus on TTC's PRESTO passenger revenue. We decided to **not** focus on legacy fare media (tokens, cash, Metropass, tickets, other passes) in our audit scope, as it is expected the majority will be phased out by the end of 2019 (other than cash payment in some locations), and therefore related recommendations would not be of value a year from now.

Our audit methodology included a review of the following:

- By-laws, policies, procedures, and guidelines pertaining to TTC's fare inspection process and coordination with TTC's transit enforcement team
- Processes and controls in place to ensure compliance with above by-laws, policies, procedures, and guidelines
- Estimated fare evasion rate including all modes of transit (bus, streetcar, subway) and resulting impact on estimated revenue loss to TTC
- Controls over potential abuse of PRESTO cards (including concession cards)
- Analysis of revenue and ridership data
- Benchmarking of fare evasion and fare inspection rates of other transit agencies, as well as controls to mitigate revenue loss.

Fare Inspection Approach and Methodology

In order to measure fare evasion for our audit, we conducted six weeks of fare evasion observation, with two weeks on each of the three modes of transit (streetcar, subway, bus) during November and early December 2018. Our hours of observation totalled 174 hours over the six week period and included 80 hours on streetcars (including on and off-boarding and plain clothes and uniform inspections), 34 hours on buses, 22 hours in subway stations, and 38 hours of TTC security camera footage for our work on illegal entries at four automatic subway entrances.

The number of passenger inspection observations for our fare evasion rate during this time totalled 19,647 (plain clothes inspections only), with 3,957 on streetcars (on-boarding), 1,722 on buses, 9,342 on subways, as well as approximately 4,626 from reviewing TTC security camera footage on illegal entries.

The inspection work during these audit shifts was conducted by TTC Transit Fare Inspectors (Fare Inspectors) with Audit staff in attendance - observing and recording. Audit staff did not interact with passengers. Both Fare Inspectors and Audit staff used their own fare evasion field data collection forms (Fare Inspectors forms called DAR sheets).

During audit shifts, each Audit staff member was assigned to a particular TFI and stood near the TFI during the fare inspection. Audit staff recorded the number of inspections and violations issued by the Fare Inspectors. We requested that Fare Inspectors issue verbal warnings only, unless a written ticket was necessary, such as fraudulent use of the Child PRESTO card. This was done so that a 100% sweep of vehicles would be possible to accurately measure the fare evasion rate and achieve a higher level of coverage of ridership.

At the end of each vehicle/station inspection, Audit staff confirmed the inspection results with the Fare Inspectors to ensure consistency and accuracy. Audit staff also took pictures of the completed TFI inspection result forms at the end of each shift, and reconciled a sample of these to TTC's fare inspection database.

Fare inspection was done with a mix of shifts in uniform and in plain clothes, except for buses which were only done in plain clothes due to timing and TTC resource constraints. To be consistent and to reflect what we see as the accurate fare evasion rate, we used only the plain clothes inspection results to calculate the mode and overall transit wide fare evasion rate.

Our sample selection for streetcars, buses and subway stations was based on those with the highest level of ridership. For buses and subway stations, we also ensured there was geographic coverage across the City of Toronto (north, south, west, east). We ensured that the number of observations during our audit work would provide a 95% confidence level.

Limitations

Fare evasion rates may be understated due to limitations noted in audit work

It should be noted that our fare evasion rates in this report may be understated as our audit work was limited in certain areas.

Peak Rush Hour Time and Congested Vehicles

Audit shifts did not include congested vehicles

We were unable to enter streetcars and buses that were very congested (generally during height of peak rush hour times).

Subway:

Legacy Fare Media including Metropass

Subway observation work focused on PRESTO cards and did not include legacy fare media

There is a caveat with the subway fare evasion rate that our subway audit fare inspection work focused on the PRESTO card fare payment and did not include legacy fare media, other than some obvious fare evaders that attempted to pass by the fare collector booth without paying.

Capacity to Inspect All PRESTO Concession Card Taps

Due to high number of tickets issued in subway stations for fraudulent use of PRESTO concession cards, capacity was impacted

Although we had two teams of two Transit Fare Inspectors to handle the higher volume at subway stations, it was not uncommon for all four to be tied up writing tickets at one given time for inappropriate PRESTO concession cards, and therefore not all PRESTO concession card taps were able to be inspected. Some of these passengers not inspected may have represented additional fare evasion.

Subway Ridership Data

Some fare gate data on valid PRESTO taps for subway fare evasion calculation not available from TTC due to system crashes on several different days, times and stations

There were also limitations with the subway data provided for total riders with valid taps through the TTC fare gates for PRESTO cards (used for our denominator in subway fare evasion rate), as 12 of the total hours requested had system crashes for ten fare gates. As a result we used the data available on the other gates to pro-rate an estimate for the gate where no data was available. We plan to examine the issue of data unavailable due to system crashes in Phase 2 of our audit.

Compliance with generally accepted government auditing standards

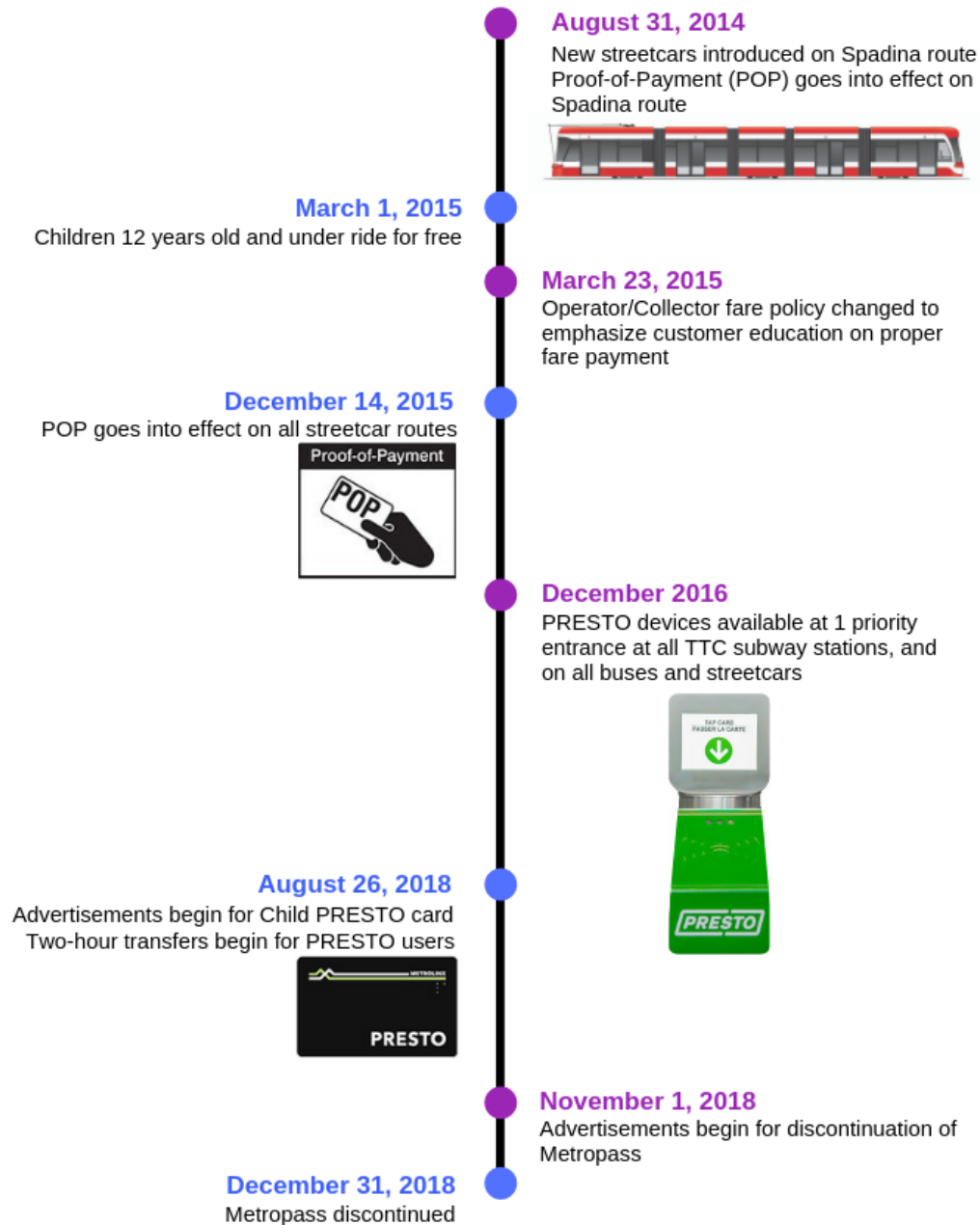
We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Exhibit 1: Specific Risks of Fare Evasion by Mode for TTC

Transit Mode	Streetcar	Subway	Bus
Type of transit system (open vs closed)	Open system – passengers required to have Proof-of-Payment	Closed system – passengers must pay prior to entering the paid area	Closed system – passengers must pay when entering bus
Design	<p>Newer streetcar design – four doors for entry/exit and no interaction between passenger and operator</p> <p>PRESTO card indicators show the same yellow light for all concession cards, so streetcar drivers (on older 'legacy' streetcars) do not know the type of concession card used and whether it was appropriate fare payment. (e.g. adult could use Child PRESTO card without bus driver knowing)</p>	<p>TTC fare gates easily allow for different types of illegal entry. (e.g. tailgating, opening for next person, going through gap, using object to open)</p> <p>Automatic subway entrances with no TTC staff present can increase the risk that passengers will try to evade fare payment.</p> <p>Other subway entrances with bus bays on the surface level and no physical barriers also increase the risk of fare evasion.</p>	<p>On articulated buses there are three doors. If bus drivers open all doors for entry, there can be increased risk of fare evasion.</p> <p>PRESTO card indicators show the same yellow light for all concession cards, so bus drivers do not know the type of concession card used and whether it was appropriate fare payment. (e.g. adult could use Child PRESTO card without bus driver knowing)</p>
Policy	Streetcar Drivers (older 'legacy' streetcars) are required per TTC policy to observe fare payment and educate the passenger but are not required to enforce fare payment, given safety risks to themselves.	TTC Crash gate staff are instructed to lock their farebox when leaving the crash gate.	<p>Bus Drivers are required per TTC policy to observe fare payment and educate the passenger but are not required to enforce fare payment, given safety risks to themselves.</p> <p>Buses are not Proof-of-Payment, so if a bus stops at a subway station stop, the bus driver opens all doors for entry and does not check fare payment, as passengers should be entering from the subway station. However, there is a risk that passengers enter from the street without paying.</p>
Equipment Functionality	Metrolinx Single Ride Vending Machines were not always working – some passengers legitimately could not pay and others are aware they are often	TTC fare gates are often stuck in an open position, allowing many passengers to enter without paying.	PRESTO card readers are not always working. If the vehicle is congested, it can be difficult for the customer to tap another reader or they may decide not to.

Transit Mode	Streetcar	Subway	Bus
	<p>broken and use this as an excuse.</p> <p>PRESTO card readers are not always working. If the vehicle is congested, it can be difficult for the passenger to tap another reader or they may decide not to.</p>		

Exhibit 2: Timeline of Key TTC Fare Policy Changes (2014 – 2018)



APPENDIX 1: Management's Response to the Auditor General's Report Entitled: "Review of Toronto Transit Commission's Revenue Operations: Phase One – Fare Evasion and Fare Inspection"

Overall Management Response:

We appreciate the Auditor General's comprehensive and important insights into the current state of fare evasion. As set out in our detailed Management Responses, we accept all 27 recommendations and in most cases will be acting either immediately or over the course of 2019. A few of the recommendations will require coordinated effort with regional partners, Metrolinx (as the operator of PRESTO) and/or the City. We are currently developing a work plan to address the recommendations in this report and will bring forward related actions to the TTC Board, as required, as we progress through the recommendations. Furthermore, we will provide a detailed Fare Compliance Action Report to the TTC Board by September 2019.

As the Auditor General has noted, a certain level of fare evasion is inevitable. Fare evasion on the TTC has been exacerbated in recent years as we transitioned from our legacy fare payment system to PRESTO and our focus on addressing implementation issues in partnership with Metrolinx and minimizing transition period inconvenience for our customers.

PRESTO is now substantially implemented, accounting for over 75% of all fares paid as of January 2019, up from 25% just one year ago. Although more is required, PRESTO equipment and network reliability is much improved. In addition, we have increasing experience with significant service enhancements such as all-door boarding and fare card readers, child and other concession cards, and expedited (i.e. crash gate) or unattended fare card entry at certain subway entrances. There are currently 62 Transit Fare Inspectors (TFIs) and an additional 11 in training that will be ready for duty in March 2019. Decisions were made in mid-2018 as part of the 2019 planning and budget processes including the addition of 70 Transit Enforcement personnel, including 45 Fare Inspectors, 22 Transit Enforcement Officers and 3 Administrative & Supervisory support. We also established a new revenue control unit within the Finance group. All of these decisions were in support of rebalancing customer convenience against fare education, inspection and compliance in early 2019 as soon as the Metropass had been discontinued and PRESTO became the predominant fare payment method. That time is now.

Recommendation 1: The Board request the Chief Executive Officer, Toronto Transit Commission, to set acceptable targets for its fare evasion rates (by mode and overall) and to develop short and long-term strategies to reduce the fare evasion rates and the resulting revenue loss, while ensuring good customer service.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

As recommended, we will set out targets and strategies for reducing fare evasion in a Fare Compliance Action Report to be tabled by September 2019. The report will note the trade-offs between customer service, equitable system access and revenue control. Strategies will be mode specific and will include communications, customer education, data analytics, staffing mix (including plainclothes monitoring and inspection) and spot-checks.

Recommendation 2: The Board request the Chief Executive Officer, Toronto Transit Commission, to raise customer awareness and understanding of the importance of paying the appropriate fare, as well as the PRESTO card payment process, Proof-of-Payment system, and consequences if found evading fare.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation. Strategies for raising customer awareness and understanding the importance of paying the appropriate fare, the Proof of Payment system, consequences of evading fare payment, etc. will be included in our Fare Compliance Action Report to be tabled by September 2019. Some customer communication will begin immediately, in March 2019.

Recommendation 3: The Board request the Chief Executive Officer, Toronto Transit Commission, to:

- a. Accurately measure and publicly report on the fare evasion rate every year; and**
- b. Reports from Internal Audit on fare evasion study should be made public.**

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendations. In our Fare Compliance Action Report, we will be proposing annual reporting, likely beginning in Q4 2019, certain quarterly reporting beginning in 2020, and associated monitoring to inform these reports.

Internal Audit will continue to provide results of any fare evasion related work to the Audit and Risk Management Committee, a sub-committee of the TTC Board.

Recommendation 4: The Board request the Chief Executive Officer, Toronto Transit Commission, to further improve the fare inspection program by ensuring:

- a. Adequate training to Fare Inspectors on data collection and why this work is important to Toronto Transit Commission;**
- b. Development of realistic and clear performance expectations; and**
- c. Implementation of ongoing monitoring of staff performance and regular review of inspection data.**

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendations. Some retraining is already occurring. Enhanced reviewing of inspection and PRESTO data is also already occurring. A full review of training, performance expectations and monitoring of staff performance will be included in a Fare Compliance Action Report by September 2019.

Recommendation 5: The Board request the Chief Executive Officer, Toronto Transit Commission, to explore system wide options that can help prevent and reduce fare evasion on streetcars with multiple doors and Proof-of-Payment policy.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation and will explore system wide options for improving fare compliance on streetcars. An initial report will be included in the Fare Compliance Action Report by September 2019. A more thorough study will be completed by March 2020, balancing customer experience, streetcar system capacity and fare compliance.

Recommendation 6: The Board request the Chief Executive Officer, Toronto Transit Commission, to expand its fare inspection program to include buses and develop effective fare inspection methods for buses.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation. TTC's fare inspection program currently has 62 Fare Inspectors and an additional 11 in training that will be ready for duty in March 2019. Hiring will continue throughout 2019 as, on January 24, 2019 as part of the TTC's 2019 Operating Budget, the TTC Board approved hiring an additional 70 Transit Enforcement personnel, including 45 Fare Inspectors, 22 Transit Enforcement Officers and 3 Administrative & Supervisory support. As planned, some of these additional fare inspection personnel will be deployed to buses as soon as hired and trained. Also, TTC's Capital Investment Plan includes funds to convert bus "open drop" fare boxes with more technologically sophisticated fare boxes.

Recommendation 7: The Board request the Chief Executive Officer, Toronto Transit Commission, to ensure that bus operators and streetcar operators are instructed and trained to press the fare dispute key whenever the appropriate fare is not paid. Data from the fare dispute keys should be routinely analyzed and used to aid in the strategic allocation of fare enforcement resources.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation. Additional operator communication and retraining on our existing fare dispute key procedure is already underway and will continue. The Finance Revenue Control unit will augment our monitoring of fare dispute key data, supported by improved data from the new VISION system. Using this data, fare inspectors will be deployed to high incident routes and locations. Additional details and early results will be included in the Fare Compliance Action Report by September 2019.

Recommendation 8: The Board request the Chief Executive Officer, Toronto Transit Commission, to expand its fare inspection program to include coverage of subway station entrances.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation and, as planned, some of the additional fare inspection personnel approved on January 24, 2019 as part of the TTC's 2019 Operating Budget will be deployed to subway entrances as soon as hired and trained.

Recommendation 9: The Board request the Chief Executive Officer, Toronto Transit Commission, to take the necessary actions to reduce the number of illegal entries, particularly at automatic subway entrances, including:

- a. Perform a cost-benefit analysis of continuing to keep the automatic entrances open, whether to install high gates in high-risk entrances at subway stations, and whether to station Toronto Transit Commission staff at some of these entrances;
- b. Complete work on the fare gate sensors and fare gate event data reporting, so that information can be used to determine the rate of illegal entries at subway stations and to strategically allocate fare inspection resources; and
- c. Ensure security camera video is monitored on a regular basis.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendations and will undertake the analysis. Faregate configuration changes are required to ensure the data is accurate and consistent with TTC requirements. The configuration

changes are expected to be completed during 2019. Cameras and monitors will be installed at automated entrances to encourage fare compliance and the monitor will show the fareline in realtime. This will allow the TTC to more closely monitor the fareline and will provide a deterrent effect as customers and “would be” fare evaders will see themselves on the screen. The current plan is to install in 2022. However, TTC is exploring ways to advance the schedule. Additional detail will be included in the Fare Compliance Action Report by September 2019.

Recommendation 10: The Board request the Chief Executive Officer, Toronto Transit Commission, to ensure the contracted service requirements are upheld regarding functionality of Metrolinx Single Ride Vending Machines and PRESTO Card Readers, and recover from Metrolinx lost passenger revenue.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation and will continue to work with Metrolinx on this along with other financial and operational matters. Although our contracts with Metrolinx have formal dispute resolution procedures, both parties agree that discussion is preferable. TTC has invoiced Metrolinx for lost revenues resulting from PRESTO equipment not working for the three years ending December 31, 2018. We are keen to resolve this issue.

Recommendation 11: The Board request the Chief Executive Officer, Toronto Transit Commission, to review current TTC fare gate functionality issues, and develop and implement short and long-term strategies to improve fare gate functionality to reduce revenue loss.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation. Faregate reliability continues to improve, increasing to 98.1% in December 2018, and we are working with the manufacturer Scheidt & Bachmann on software and hardware enhancements to further improve reliability for our customers. Ongoing and proposed actions will be included in the Fare Compliance Action Report by September 2019.

Recommendation 12: The Board request the Chief Executive Officer, Toronto Transit Commission, to instruct and train crash gate staff on Toronto Transit Commission (TTC) policy, to request the fare collector to close the TTC fare gate when unattended by TTC staff, and to ensure fare collectors are trained in this task.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation and will be providing the necessary retraining on existing procedures for booth and crash gate staff.

Recommendation 13: The Board request the Chief Executive Officer, Toronto Transit Commission, to re-assess whether there is a critical need to issue Child PRESTO cards, balancing provision of good customer service with the risk of fraudulent use of the Child Cards.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We will undertake the recommended assessment mindful of the need to collaborate with Metrolinx and our regional transit system partners, all of which use the PRESTO child card, and also mindful that many of our younger customers and their parents and caregivers value the child card because it proves they are legitimately using the TTC for free.

Recommendation 14: The Board request the Chief Executive Officer, Toronto Transit Commission, to *NOT* distribute the Toronto Transit Commission's promotional Child PRESTO cards until appropriate controls are in place.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation and have not distributed the promotional Child PRESTO cards. As we transition to a new subway station staff model, entry into the system will require tapping a PRESTO card or ticket at a fare gate. Older children travelling alone will need a PRESTO card to access the subway station. Currently customers must pay \$6 for a PRESTO card and add \$10 in funds per Metrolinx policy. This requires our child customers to pay \$16 to access free transit. Providing promotional PRESTO cards was intended as a goodwill gesture to customers, in particular low-income families who may not be able to afford the \$16 cost. The complimentary Child cards expire after 1 year, requiring the cards to have the concession set again.

Establishing appropriate controls will need to be a priority. Once we transition to the subway model, up to 175,000 children will need to have PRESTO cards in order to conveniently access the system.

Recommendation 15: The Board request the Chief Executive Officer, Toronto Transit Commission, to explore ways to provide a Child PRESTO Card that is visually different from an Adult PRESTO card, including further negotiation with Metrolinx to issue visually different PRESTO cards for adults and children aged 12 and under.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation and agree that visually distinct Child PRESTO cards would provide a level of support for fare compliance. Such cards would also make it easier for our customers caring for children to distinguish between their adult and child cards. TTC has asked Metrolinx to consider this idea in the past and we will continue to explore this with them. PRESTO cards are distributed across the GTHA and Ottawa. Any changes would require alignment and agreement by Metrolinx.

Recommendation 16: The Board request the Chief Executive Officer, Toronto Transit Commission, to make the necessary changes to the Child PRESTO cards so that bus and streetcar operators can spot inappropriate use of PRESTO concession cards including:

- a. Negotiate with Metrolinx to provide a different light and sound on PRESTO card readers for Child PRESTO cards from other concession types; and
- b. Perform cost benefit analysis and consider making change to Toronto Transit Commission revenue vehicles to include display of the PRESTO concession type for bus and streetcar operators.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation and agree that visually and audibly distinct fare concession use would provide a level of support for fare compliance. TTC has asked Metrolinx to consider this idea in the past and we will continue to explore this with them.

A review of the information displayed and the operation of PRESTO card readers is currently underway with Metrolinx and the other transit agencies using PRESTO. TTC will request this recommendation be added to the review process.

Other transit agencies that use PRESTO have a separate device and display for operators to sell PRESTO products and load value on the PRESTO card and set other transit configuration parameters for the vehicle. These devices also display information for PRESTO card payments. TTC does not currently provide these PRESTO sales services onboard vehicles.

Recommendation 17: The Board request the Chief Executive Officer, Toronto Transit Commission, to ensure adequate controls are in place and consistently applied in the issuance of Child PRESTO cards by Distributors.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept this recommendation. Metrolinx has provided copies of the training information provided to Shoppers Drug Mart staff. The training information includes the requirement to request ID prior to setting the child concession on a PRESTO card. The TTC's policy is that Government Issued ID is required to set a child concession on a PRESTO card. That allows the retailer to determine eligibility and concession end date (the child's 13th birthday).

TTC staff are also working with Metrolinx staff to consider improved fraud detection options. Part of the work involves improving controls and trend analysis to better detect the fraudulent sales and use of Child PRESTO cards as well as other fraud within the system.

Recommendation 18: The Board request the Chief Executive Officer, Toronto Transit Commission, to find ways with Metrolinx to either seize or obtain confirmation of deactivation for Child PRESTO cards found to be fraudulently used.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation and will discuss it with Metrolinx. TTC staff currently have the ability to request deactivation (hotlist) PRESTO cards that are found to be used fraudulently. Current reporting is also available to confirm when a card has been deactivated within the system. The TTC Revenue Control unit will establish a procedure to confirm deactivations. TTC is also working with legal and partnering agencies on the appetite for card seizure and hope to resolve by Q1 2020. A further update will be provided in the Fare Compliance Action Report by September 2019. Fraudulent use of Child PRESTO cards is an increasing concern as the number of active Child cards continues to increase.

Recommendation 19: The Board request the Chief Executive Officer, Toronto Transit Commission, to work with Metrolinx to determine the feasibility of temporarily suspending the Child PRESTO cards on the Toronto Transit Commission until appropriate controls are in place.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation and will review with Metrolinx the feasibility of temporarily suspending child cards for use on the TTC. The discussion will include a review of the revenue risks as identified in the report.

Recommendation 20: The Board request the Chief Executive Officer, Toronto Transit Commission, to conduct a cost-benefit analysis of Transit Fare Inspectors vs. Transit Enforcement Officers with a view to improving the effectiveness and efficiency of the fare inspection program.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We will undertake the recommended analysis and incorporate initial thinking into the Fare Compliance Action Report by September 2019. A number of factors will need to be considered and a final recommendation will be made by Q1 2020.

Recommendation 21: The Board request the Chief Executive Officer, Toronto Transit Commission, to review the level of authority, tools and uniform provided to Transit Fare Inspectors to ensure they can carry out their duties in a safe and effective manner.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We will undertake the recommended review and incorporate initial thinking into the Fare Compliance Action Report by September 2019. A number of factors will need to be considered and a final recommendation will be made by Q1 2020.

Recommendation 22: The Board request the Chief Executive Officer, Toronto Transit Commission, to take steps to improve the speed, reliability, and functionality of PRESTO hand-held devices for fare inspections. Such steps should include, but not be limited to:

- a. Improving tracking and reporting of the functionality and repairs of the hand-held devices;
- b. Finalizing the Service Level Agreement with Metrolinx, which should specify a level of speed and functionality for the hand-held devices that meets Toronto Transit Commission's business requirements; and
- c. Holding Metrolinx accountable for its contracted service requirements on the speed, reliability and functionality of the hand-held devices supplied to the Toronto Transit Commission.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We support the recommendation.

We will undertake the recommended improvements to tracking and reporting and will provide an update in the Fare Compliance Action Report by September 2019. Metrolinx is responsible for PRESTO hand-held functionality and repairs. It is our intention that this be formally measured and managed within a final Service Level Agreement if/when completed and executed.

Finalizing a Service Level Agreement (SLA) with Metrolinx requires both parties to agree. We have retained third-party professional advisors experienced with normal industry electronic fare collection performance metrics to inform our discussions with Metrolinx, and also commercial management and legal advisors. In the meantime, there are interim service level standards in our agreement which we believe should inform the final Service Level Agreement.

Similarly, contracted service requirements require both parties to agree on what the written requirements mean. Negotiations to finalize the Service Level Agreement (SLA) include our need for reasonable device performance and availability consistent with already-contracted TTC Business Requirements. TTC will work with Metrolinx to improve the functionality of the devices to improve our ability to quickly verify proper fare payment.

Recommendation 23: The Board request the Chief Executive Officer, Toronto Transit Commission, to improve the effectiveness of the off-boarding inspection process to minimize the number of passengers walking away from fare inspection, including measures such as installation of temporary or permanent physical barriers where feasible, and assigning a sufficient number of Transit Fare Inspectors and Transit Enforcement Officers for the off-boarding inspection.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We will undertake the recommended review of our off-boarding inspection process and incorporate initial thinking into the Fare Compliance Action Report by September 2019. With respect to physical barriers, the review will be mindful of safety considerations, which are paramount.

Recommendation 24: The Board request the Chief Executive Officer, Toronto Transit Commission, to provide Transit Fare Inspectors with efficient access to the previous fare evader database during inspections.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendations and will incorporate our initial thinking and action already underway at that time into the Fare Compliance Action Report by September 2019.

Recommendation 25: The Board request the Chief Executive Officer, Toronto Transit Commission, to improve the effectiveness and consistency of the scheduling practices of its fare inspection program to:

- a. Ensure the route and timing coverage is risk-based and strategic; and
- b. Increase the use of plain clothed Transit Fare Inspectors as it enables a more accurate assessment of fare evasion rates and a more effective inspection program.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation and will incorporate initial thinking into the Fare Compliance Action Report by September 2019.

Risk based coverage is increasingly data driven on all modes. Fare gate and fare dispute button data will allow us to focus on more of a risk-based approach, with a target full implementation date of Q1 2020.

Increased use of plain clothed inspection will be used to monitor and report on fare compliance.

Recommendation 26: The Board request the Chief Executive Officer, Toronto Transit Commission, to explore ways to increase actual inspection time by Transit Fare Inspectors including:

- a. Automating the manual ticketing process and the recording and reporting of fare inspection results;
- b. Assessing the feasibility of establishing an internal fare evasion ticket appeal process, similar to Metrolinx (GO Transit); and
- c. Exploring ways to reduce travel time by Transit Fare Inspectors between their reporting and lunch locations and assigned routes.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendations and will incorporate initial thinking and action already underway at that time into the Fare Compliance Action Report by September 2019.

The need for Early Resolution notes is time consuming regardless of whether it is pen to paper or an automated device. However, the introduction of a new Records Management System will cut down on administrative time, with a target date of Q1 2020.

We will explore options for an internal ticket appeal process. Currently, the City's Early Resolution process can be used for TTC fare evasion fines and is identical to the one used by Metrolinx for all Provincial Offences Act matters. However, Metrolinx also issue in-house Notice of Violation offences which are dealt with through an internal appeal process. They are only hearing By-Law matters, no provincial matters, i.e. Liquor Licence Act.

Recommendation 27: The Board request the Chief Executive Officer, Toronto Transit Commission, to finalize updating the TTC By-law No. 1 and enhance the Fare Inspection Policies and Procedures manual to ensure they are up to date and include sufficient details to facilitate consistent fare inspections.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

We accept the recommendation. We initiated an update of our By-law during 2018 and are targeting completion by Q1 2020. Policies and procedures will also be reviewed and updated. An update will be provided in the Fare Compliance Action Report by September 2019.

**AUDITOR
GENERAL**

TORONTO

